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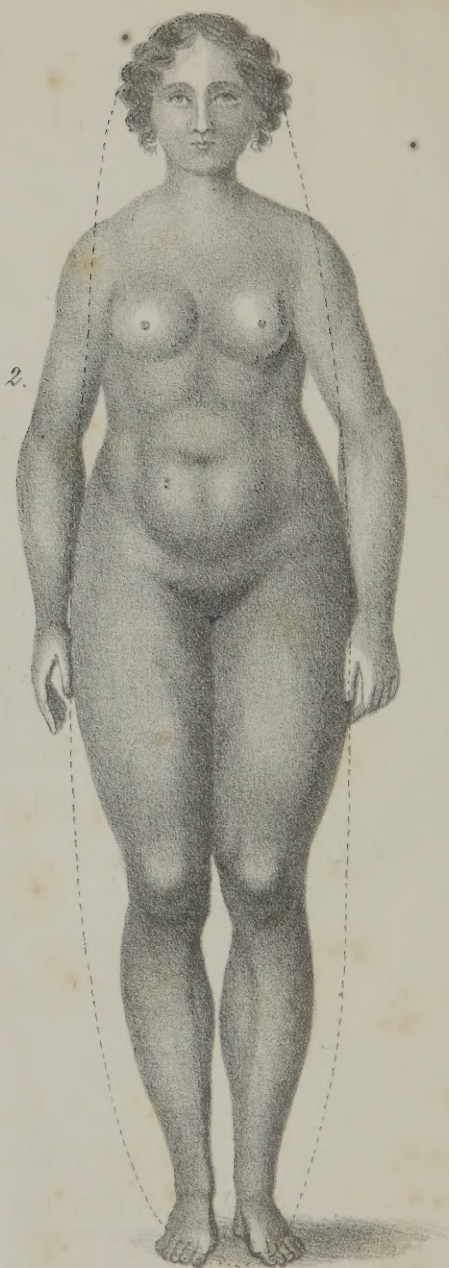
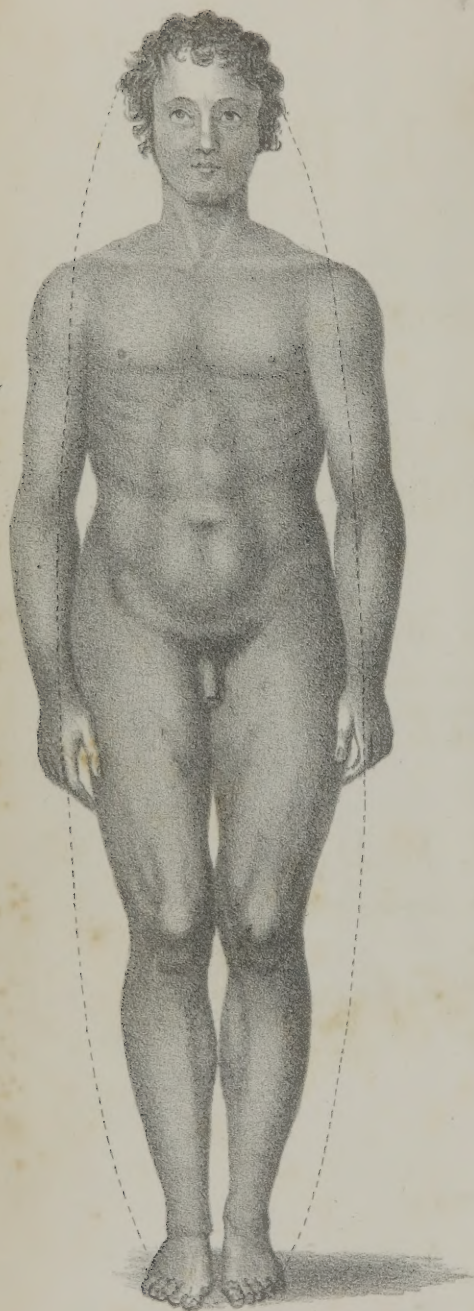
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Comparison of the Male and Female.



ILLUSTRATED
M I D W I F E R Y ;

-OR-

LECTURES ON OBSTETRICS,
AND THE
Diseases of Women and Children.

By B. L. HILL, M. D.,

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PREFACE BY THE REVISOR.

The following is a course of fifty-seven Lectures delivered by Prof. B. L. Hill, in the E. Medical Institute, at Cincinnati, in the year 1851; and were then taken down, by a stenographer as delivered. They were afterwards written out by the same person who took them in short hand, and Prof. Hill, himself, had designed to *revise* them and prepare them for the press; but his sudden transfer into another field of labor prevented this.

The work was then committed by the publisher to my hands for *revision*. How well I have performed this duty the reader must judge.

It is unnecessary that I should make any remarks here in reference to the character of the work—it shows for itself, on every page. Its prominent characteristic is simplicity of style and language. It is evident that the lecturer had in view *but a single purpose* in the manner of his teaching—it was *to instruct his class*. His plain, terse, and impressive language; his reiterations, and common-place illustrations, and his pointed and imperative directions, indicate fully his commendable purpose—to *teach*—TO INSTRUCT.

It is more than probable that had the author of these lectures revised them himself, and prepared them for their appearance before the public, he would have changed his language and style. He would thus have improved the work for the *refined* and *literary* taste, and would have done his superior talents and his education better justice: but it is not certain whether he would have made his work more use-

ful to the student of medicine ; and it must be remembered that these lectures were intended for the *student*. In this respect my labor was well defined, for besides the specific injunction of the publisher, to preserve the style and language of the author, I found that unless I should *re-write* all the lectures, I could change them but little in these particulars.

In regard to the description of organs, and structures, there has been no change of any thing that was written. A few sections had been left imperfect, and were completed by myself.

In the details of the peculiarities of the female constitution, and of pregnancy, but little has been added, or changed. The author's views are clear and are fully and plainly given, and differ from other authors, more in the style of their communication than in *principle* or DOCTRINE. Our author's manipulations and practice in Obstetrics, are rather original and peculiar, in some particulars. His plans are safe and expeditious, but rather laborious and precipitant. I have, in one or two instances, offered such suggestions in the form of foot-notes as I considered improper for me to add to the text.

In the description and treatment of the "diseases of Women and Children," I have, perhaps, supplied most of my labor as Reviewer. But here, also, I have endeavored to carry out the plans of the author and have fully conformed to his principles.

The treatment, in the various diseases will be found to be very thorough ; perhaps too much so ; and I have in most of my corrections found it necessary to lessen and modify the amount and thoroughness, or even *severity* of the treatment.

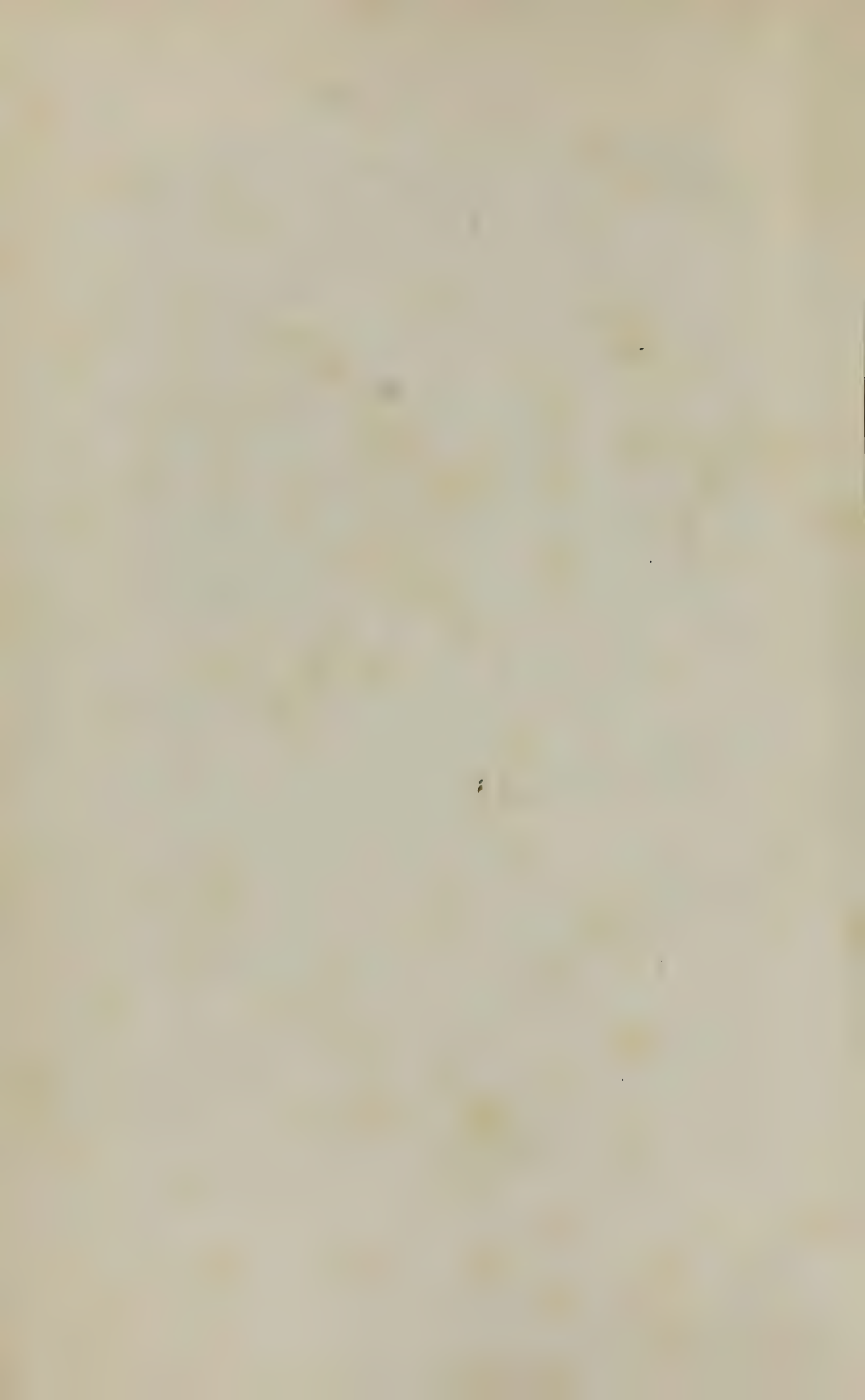
It must be observed, however, that a very considerable part of the complicated treatment pointed out in the different cases is to be understood in a collective sense. Our author repeats the different remedies useful or applicable in the cases in point—he orders the student to use *this*, give *that* and employ the *other* ; *not all at the same time*, but alternately, or in substitution of one article or plan for another.

In the treatment, I have added remedies, in some instances where blanks had been left; in others where I found new articles of the same kind, but superior to those recommended. Our *Materia Medica* and *Pharmacopea* is constantly improving, and I have thus been able to benefit this work, I hope, at least to some extent, by adding what the advancement of our art, in this respect, enabled me to do.

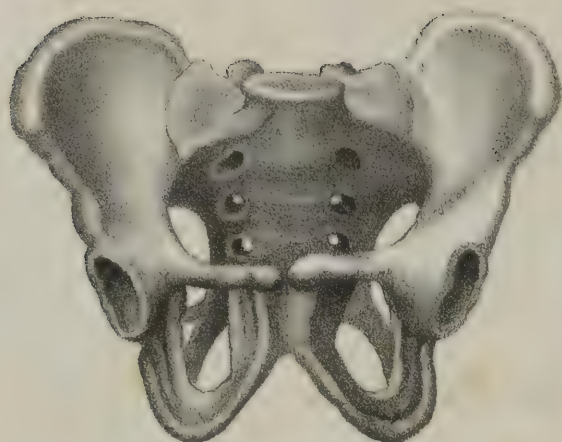
With these remarks I submit the work to a generous public, not doubting but that the labor of the revision might have fallen into better hands, yet hoping that the work itself, and with my improvement, may prove acceptable, especially to the young of our profession; and that it may be the means of doing some good in relieving the sufferings of the "*weaker sex*," and the *infant world* I add my sincere wishes and prayer.

THE REVISOR.

MACON, January, 1855.

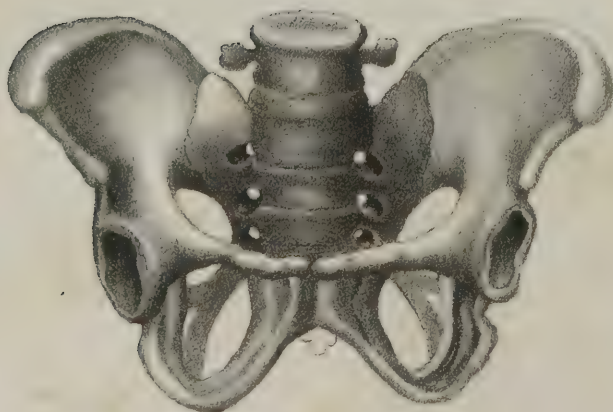






3.

Adult Male Pelvis



4.

Adult Female Pelvis

LECTURE I.

OF THE FEMALE PELVIS.

(See *Figure 4.*)

The Pelvis, in a general sense, is only one division of the skeleton, constituting the study of osteology; but in its relations with parturition, the pelvis is a part of a series of organs, all which series concurs to accomplish the generative functions. We proceed now to contemplate it in this point of view; and its careful study is highly important, as this only can make known the real mechanism of parturition, and the greater or less difficulties which sometimes render it complex and even serious.

The study of the pelvis contemplates, 1st, its simple description; 2d, its general and special division, and dimensions; 3d, its connections; 4th, its anomalies or malformations.

DESCRIPTION OF THE PELVIS.

The pelvis is the bony cavity, or basin supporting in its posterior portion the vertebral column. It is composed of four bones, the *sacrum*, *coccyx* and the two *iliacs*.

Sacrum. This is an unmated bone, pyramidal, and triangular in shape; it is flattened, presenting its sides forwards and backwards, and forms the posterior portion of the pelvis. Its base is upwards and articulates with the last lumbar vertebra, one of which is seen in *Fig. 4*. The union here forms a remarkable prominence projecting into the pelvis, called the sacro-vertebral prominence or angle, or the promontory of the sacrum. The

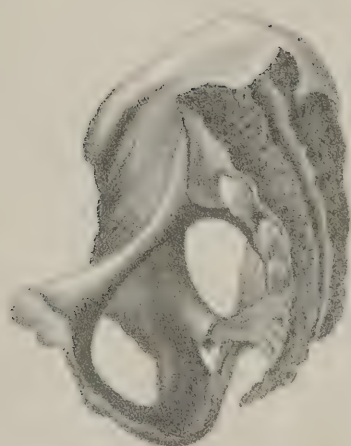
apex of the sacrum is turned downwards and articulates with the coccyx. Its anterior, internal or pelvic face is concave, and presents two rows of foramina, through which pass the anterior branches of the sacral nerves; in the natural state the rectum is resting upon this face.

The external, posterior, or spinal face of the sacrum is convex, and presents several tubercles, to which tendinous, aponeurotic and ligamentous tissues are attached. Here also are found two ranges of foramina, through which the posterior branches of the sacral nerves emerge. The two sides of the sacrum present, at their upper part, an articular impression, exactly like that of the iliac portion of the corresponding coxal bone; at its lower part, the large and small sacro-sciatic ligaments are inserted; see *Fig. 6*.

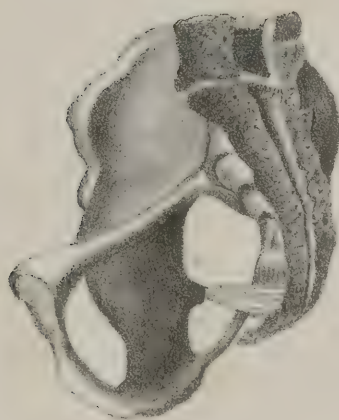
Coccyx. This is also an unmated bone, and is situated at the posterior or inferior part of the pelvis, and is attached to the apex of the sacrum to which it forms a caudal extremity. Its anterior and concave face presents to the inner side of the pelvis, and supports the end of the rectum; its posterior and convex face is situated directly under the integuments, and presents nothing worthy of remark; its base, like that of the sacrum, is turned upward, and articulates with the latter; its apex is loose and is enveloped by the surrounding soft parts. The coccyx is formed of three distinct pieces, which are susceptible of considerable motion, on account of the peculiar arrangement of the articulations; it is seen in *Fig. 6* and *12*.

The Iliac or Coxal bones. The sides and anterior portion of the pelvis is formed by the iliac bones. Their external face, the femoral, presents, at the lower part, a broad surface, called the *gluteal* region; below, there is a cavity for the head of the femur; still lower and forward is the obturator or oval foramen. The rest of the external surface presents nothing necessary to be described.

The abdominal or internal face of these bones presents, at the upper part, a broad concave surface, termed the internal iliac fossa, on which the iliacus inturnus muscle is situated; below, a



5.

Section of the Male Pelvis.

6.

Section of the Female Pelvis.

7.

Section of Fetal Pelvis

prominent line which proceeds obliquely from behind forward ; still lower, the opening of the obturator or oval foramen ; behind this foramen, a broad surface, which forms an inclined plane on which the head of the fetus glides during parturition.

The circumference commences above and forward by the anterior and superior spine of the ilium ; following it backward, we find the crest of the same bone in the form of the letter S ; still further backward, the great ischiatic notch ; below, the ischiatic spine and the small ischiatic notch ; entirely below, the tuberosity of the ischium ; reascending forward, the ascending branch of the ischium and the descending branch of the pubis, above, the symphysis pubis, which is nearly two inches high and from six to eight lines broad ; anteriorly, the spine of the pubis and its horizontal branch, at which place we observe the ilio-pectineal eminence, and more posteriorly, a groove on which the united tendons of the psoas and iliacus muscles glide.

In anatomy it is necessary, but still more so in obstetrics, to divide the iliac or coxal bone into three parts ; which are the ilium above, the pubis below and forward, and the ischium below and backward. But the lines of demarcation are visible only in very young subjects ; at a later period, all the parts of the bone are so blended that they cannot be distinguished.

DIVISION AND DIMENSIONS OF THE PELVIS.

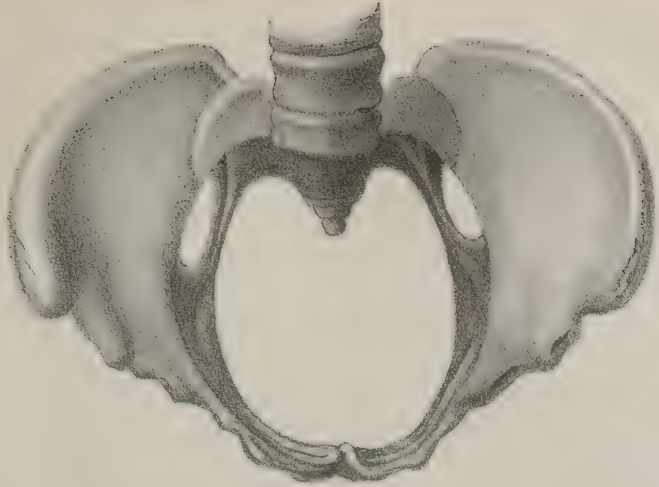
It will be necessary, before passing to the general division of the female pelvis, to point out the differences which distinguish it from the male pelvis ; and those particulars in which they both differ from that of the fetus. In looking at the two comparatively, (*see Fig. 3, 4, 5 and 6,*) it is easy to see that the pelvis of the female is lower and broader than that of the male, and that the arch in the male is much more open and rounded than that of the female ; so likewise in comparing the pelvis of the adult of either sex with that of the fetus, it will be seen that the latter is remarkable for its great length, and also for its extent from before backward, which is much greater than from side to

side, while the contrary is the case in the pelvis of the adult. (*See Fig. 7.*) The cause of this is that the sacrum is deficient,—the different pieces of which it is afterwards to be composed, have at this early period of life only the usual breadth of the other vertebra.

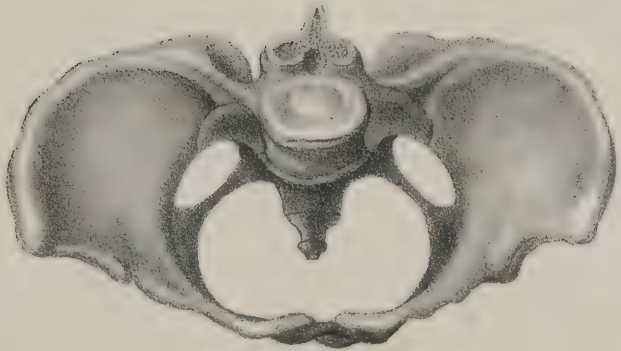
It may be remarked that in contrasting the male and female pelvis, that the latter is less strong, less thick, and contains less osseous matter than that of the male. In the female, the long diameter of the brim of the pelvis is from side to side; (*see Fig. 11*); in the male it is from before backward; in the female the brim is more of the oval shape, in the male more triangular (*see Fig. 3*); in the female the ilia are more distant; the tuberosities of the ischia are also more remote from each other, and from the os coccygis; and as these three points are further apart the notches between them are consequently wider, and there is of necessity a considerably greater space between the os coccygis and the pubis than in the male. The female sacrum is broader and less curved than that of the other sex. The ligamentous cartilage at the symphysis pubis is broader and shorter. In consequence of the cavity of the pelvis being wider in Women, the superior articulations of their thigh-bones are further removed from each other, which circumstance occasions their peculiarity in walking; they seem to require a greater effort than men to preserve the center of gravity when the leg is raised. The greater distance between the anterior and superior spinous processes of the ilia necessarily increases the length of Poupart's ligament forming the crural arch; on which account less resistance being made to the abdominal viscera, females are more subject to femoral hernia than males. It is remarked by Soemering that the angle of union of the ossa pubis is in the male from sixty to eighty degrees, whereas in the female it is ninety degrees. A well-formed female pelvis is supposed generally to be, in circumference, about equal to one-fourth of the height of the individual.

In obstetrical language the whole pelvis is spoken of as two. the *large* and the *small* pelvis. The *large* is very flaring, (*see Fig.*

4



8.



9.



10.

Deformities of the Pelvis

4,) and occupies all its upper part. It is formed posteriorly by the last two lumbar vertebræ, which must be left in place when we wish to preserve the pelvis for the study of Obstetrics. We observe anteriorly, a great fissure, occupied in the recent state by the parietes of the abdomen, which being flexible and very elastic, yield with facility to the development of the uterus during gestation. The sides of the large pelvis are formed by the iliac portions of the coxal bones. Above, it looks into the abdomen; below, it blends with the small pelvis, from which it is separated only by the slightly contracted opening, termed the superior or abdominal strait, (*see Fig. 11.*)

The *small* pelvis, or the *pelvis* properly so called, is that kind of canal through which the fetus passes, with greater or less pain, during parturition. It is narrow at its entrance and its termination, and the intermediate space presents a kind of cavity called the cavity of the pelvis, in which the head of the child, while passing, performs certain very remarkable motions which are to be mentioned hereafter.

The general figure of the cavity is not exactly quadrilateral, yet we may distinguish in it four sides. The posterior plane is formed entirely by the sacrum and coccyx, and is the longest; the anterior plane, which is the shortest, presents the symphysis pubis above, and the arch of the pubis below. The lateral planes are formed principally by the inner faces of the ischia. These four planes or sides are arranged so that the anterior and posterior are nearer each other above than below, while the contrary is true of the lateral planes. This arrangement explains the necessity of the rotary motion performed by the fetus, while passing through the cavity of the pelvis, on a knowledge of which is founded the science of the true mechanism of parturition.

Of the two openings of the lower pelvis, the upper is termed the superior or abdominal strait: the lower opening, the outlet, the inferior or perineal strait. As the study of the dimensions of the two straits of the pelvis is undoubtedly the most important item in the practical knowledge of Obstetrics, I shall treat of them somewhat particularly.

DIMENSIONS OF THE PELVIS.

In endeavoring to determine the figure of the superior strait, authors have compared it to a circle, sometimes to an oval, and again to a curvilinear triangle. The best way, however, to determine its form is to ascertain its dimensions. For a view on this point *See Fig. 11.*

In the superior or abdominal strait, commonly called the brim, we generally admit three diameters; 1st, an intero-posterior or sacro-pubic diameter, extending from the center of the promontory of the sacrum, directly to the upper and central part of the symphysis pubis; in a well-formed pelvis, this diameter measures from three and a half to four inches: 2d, a transverse or iliac diameter, the direction of which is from right to left, and reciprocally from one of the sides of the abdominal strait to the opposite side, cutting the preceding at a right angle; this diameter measures five inches; 3d, an oblique or cotylo-sacro-iliac diameter, of which there are two: one extends from the inner part of the right cotyloid cavity, to the sacro-iliac symphysis of the left side, the other from the inner part of the left cotyloid cavity, to the sacro-iliac symphysis of the right side: their direction is obliquely from before backward. This diameter measures four and a half inches. *See Plate V., Fig. 11.*

The perineal or inferior strait, the outlet, has two diameters only: 1st, an antero-posterior or conjugate diameter, which extends from the lower part of the symphysis pubis to the extremity of the coccyx. In its usual state, this diameter measures only four inches; but during parturition, the child's head presses the coccyx backward, and thus the antero-posterior diameter of the inferior strait is enlarged at least one inch. The dimensions of the transverse diameter never change. This diameter extends from one of the tuberosities of the ischium, directly to that of the opposite side; it generally measures four inches. *See Plate.*



11.

Dimensions of the superior strait.



12.

Dimensions of the inferior strait.

DIRECTION AND AXES OF THE PELVIS.

When we consider the situation of the pelvis in a female standing erect, supposing all the adjacent soft parts to be removed, it is easily seen that the plane of the symphysis pubis is much lower than that of the sacro-vertebral prominence. This depression gives an idea of what is commonly understood by the *direction of the pelvis*, the inclination of which varies from thirty-five to forty-five degrees, taking the sacro-vertebral angle at the point of departure from the horizontal line. That being given, a line drawn from about the center of the cavity of the sacrum, passing through the center of the brim of the pelvis, and going directly to the umbilicus of the pregnant female, forms exactly the axis of the strait. On the other hand, a second line drawn from the upper third of the sacrum and passing through the center of the distended vulva forms the axis of the inferior or perineal strait.

Thus it follows that the head of the child does not proceed directly in a straight line when passing through the different points of the pelvis, but in a curve which continues even through the external organs of generation, long after the head has passed through the center of the outlet. (*See Plate VII. Fig. 16.*) This motion is dissimilar to that in most animals in this stage, particularly in the mammalia, in which the two straits of the pelvis have one and the same axis, and this is parallel also to the axis of the body; the direction of this is horizontal.

LECTURE II.

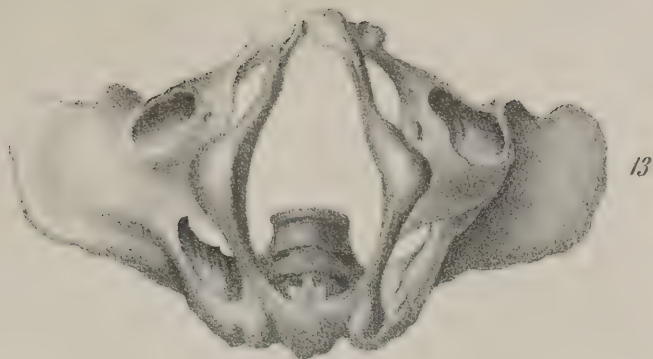
ARTICULATIONS OF THE BONES OF THE PELVIS.

The articulations of the bones of the pelvis resemble those of the same kind of bones in other parts of the system. They are spoken of as the mixed kind by some authors: the synarthrosis, or rather the amphiarthrosis of the ancients, and the articulation, by continuity, of the moderns.

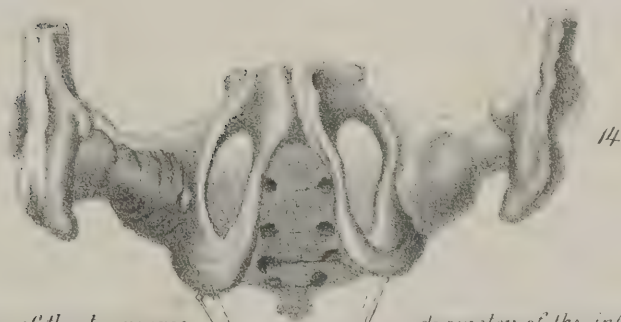
The articulations now about to be described, and which are generally termed symphysis, are that of the ossa pubis, that of the sacrum with the iliac bones, that of the sacrum with the coccyx, and the articulation of the last lumbar vertebra with the sacrum, to which must be added the description of the ligamentous and membranous parts which assist to increase the strength of the former.

Symphysis Pubis. In order to have a correct knowledge of the different symphysis of the pelvis, they should be studied in the recent state. In this state the symphysis pubis is discovered to be formed by a fibro-cartilaginous substance of a prismatic or triangular figure, which is perfectly included in the space between the articular surfaces of the ossa pubis, with which it is connected. This substance is white, elastic, thicker anteriorly than posteriorly, and is rendered firm in its position by very ligamentous and aponeurotic parts, and also in its lower portion, by a special cruciform ligament. In a first confinement, the head of the fetus sometimes vibrates upon the sharp and flexible edge of this before emerging freely from the externals.

In the center of the triangular cartilage, the tissue is evidently less dense, and more flexible: hence the possibility of a slight

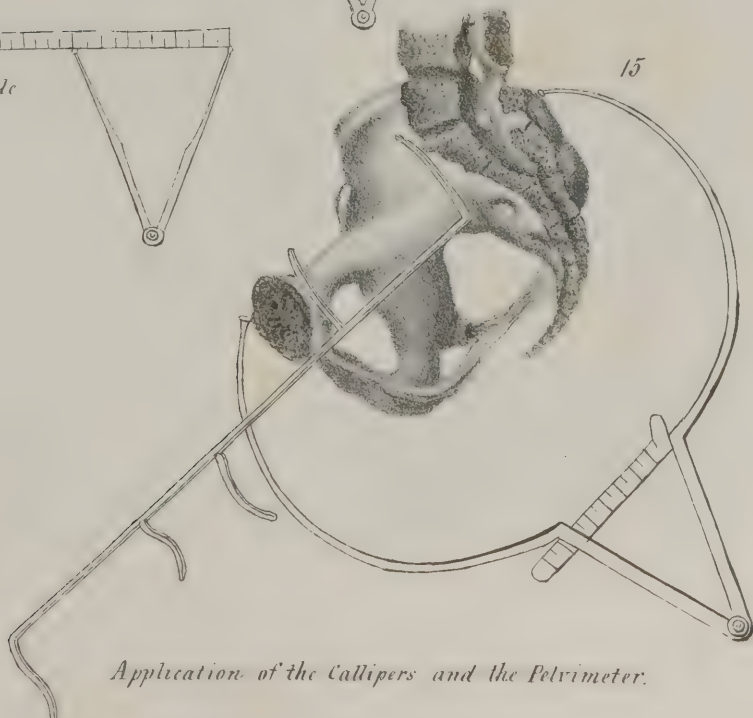
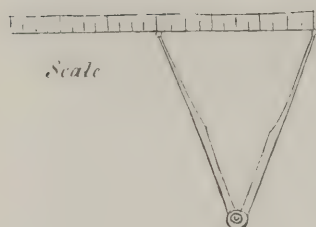


Pelvis seen from below

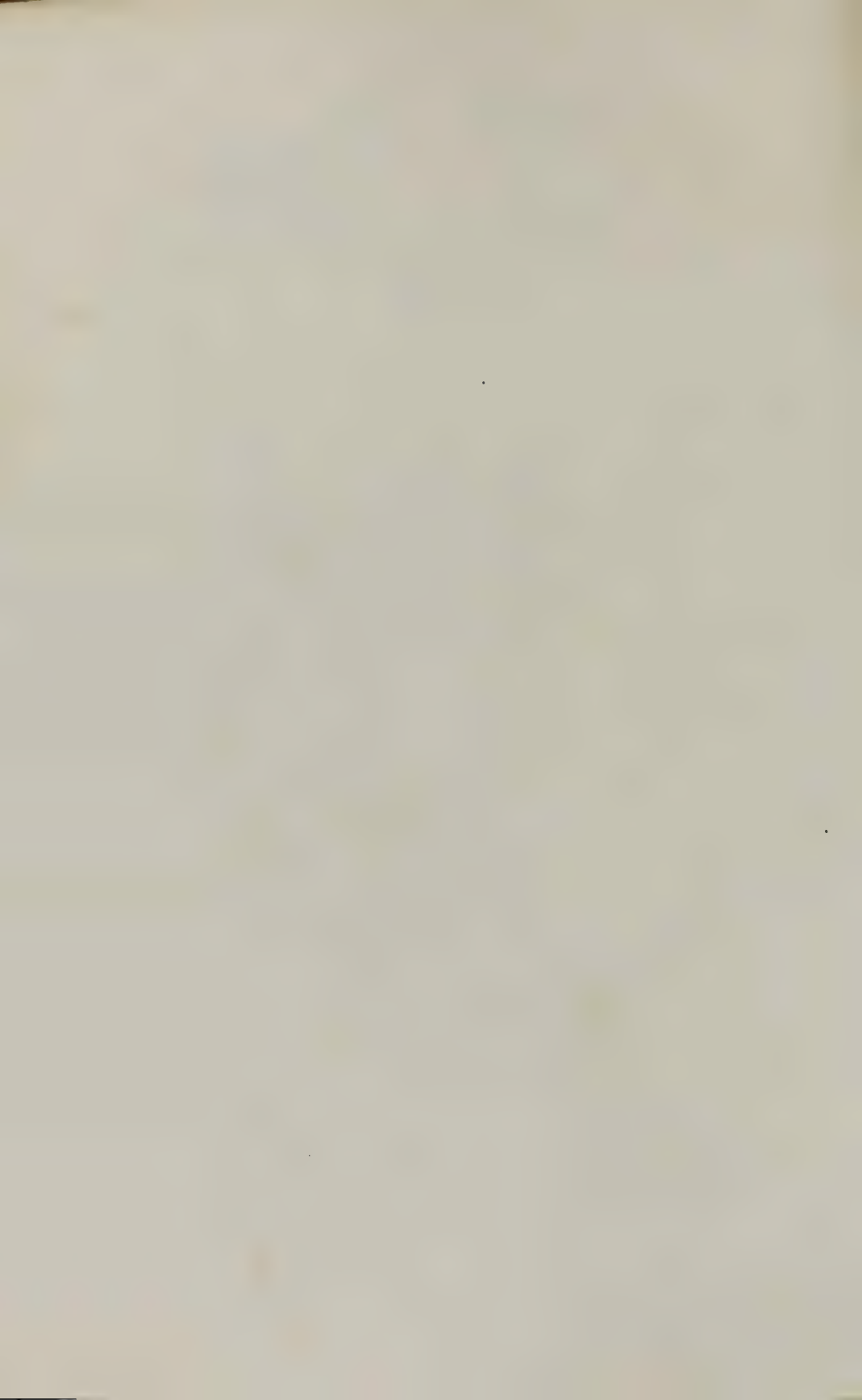


Measure of the Transverse

diameter of the inferior Strait



Application of the Callipers and the Pelvimeter.



yet real motion in the symphysis pubis. This has been observed particularly in females who have died in the later periods of pregnancy. The sensation also of weariness and fatigue complained of for a long time after a tedious and difficult labor also depends on this. Meckel, an eminent German anatomist, considers this flexibility or softening of the cartilage, as occurring normally in every state of pregnancy, and he states that "the softening begins to take place in the eighth month of pregnancy, that is, precisely at the time when the lower region of the genital organs begins to enlarge and to secrete a great quantity of mucus."—*Meckel's Anatomy*, Vol. II., p. 45.

Sacro-Iliac Symphysis. The sacro-iliac symphysis, in its mechanism, is not the same as that of the symphysis pubis, hence a difference also must exist in their mode of articulation. The sacrum is articulated with the iliac bones by the ragged and uneven arrangement of the articular surfaces which have been mentioned. Each of these surfaces is encrusted with a thin and compact layer of cartilage, which by means of its numerous points of contact causes the intimate connection of the bones, but is not entirely sufficient for their articulation, without the aid of strong and numerous ligaments, which entirely surround it, particularly at its posterior part.

Sacro-Coccygeal Symphysis. It is seen that the sacrum is connected with the coccyx, and that the different parts of the latter are united with one another by a fibro-cartilage of a soft spongy texture, and by some longitudinal ligamentous fibres. The extreme mobility of the coccyx, and the facility with which it is pushed backwards while the head of the child is passing through the outlet, depend upon this favorable arrangement.

Sacro-Vertebral Symphysis. In this articulation we find a resemblance to that of the vertebra with each other. It is worthy of note in Obstetrics only on account of the relations of the last lumbar vertebra with the sacrum, and the more or less prominent angle formed anteriorly by these two bones.

Besides these different modes of union, which serve to render the bones of the pelvis firm, there are also some ligaments which have a different use; they circumscribe the lower parts of the pelvis, and have the solidity but not the weight of bones; there are four of these ligaments, two on each side; they are termed the sacro-iliac ligaments.

DEFORMITIES OF THE PELVIS.

(See Plate IV.)

Any departure from the natural size and proportions of the pelvis is called by some authors a *deformity* of the pelvis. This is not strictly true—over or under size may exist and still the form be proper—the pelvis may be too *large* or too *small* or it may be “*deformed*.”

At first view the idea of a pelvis being too large may be thought extravagant since, as it is well known that the process of labor is generally attended with its difficulties and pain owing to obstructions to the passage of the child through the natural outlet. We would suppose that if the pelvis were very large these obstructions would exercise much less influence in labor, and the child pass out more easily. But facts show that the pelvis may be too ample, and thus occasion much difficulty, and sometimes danger to the mother. The womb fails to rise up at the time of quickening. It presses upon the rectum and is thus the cause of constipation—presses also upon the urethra, occasioning a difficulty in the passage of the urine; and as the fetus grows in the pelvis it causes great difficulty in walking—there is, moreover, danger of the uterus turning over, “*retroverting*,” and also of abortion.

To prevent abortion, should this condition of the pelvis be discovered, keep the patient in a recumbent position as much of the time as possible, about the period of quickening, and for two months after, until the womb attains the size to keep it resting on the brim of the pelvis.

It is well to place the woman in a recumbent position and introduce a sponge into the vagina; this must be removed every day and cleansed.

Not only do these difficulties occur during pregnancy, but at the time of parturition, if the pelvis be large the labor may go on too rapidly, so as to rupture the soft parts, before sufficient dilation takes place. Or, it may pass off too suddenly, and leave the uterus in an atonic state uncontracted, and thus be soon followed by dangerous hemorrhage. In such rapid labors the uterus may be ruptured, the placenta torn off, when hemorrhage will be the inevitable consequence. However, there is not so much danger from the above as has generally been supposed, and it may be nearly all prevented by proper attention—by sustaining the uterus, so as to prevent labor from proceeding too rapidly. But should the labor take place suddenly, and the placenta not be expelled, introduce your hand carefully, and take it away. This will invariably cause a contraction. If the placenta has come away too suddenly, and the uterus failed to contract, place the fingers of one hand in the uterus, and the other hand on the abdomen, and by irritating the internal surface, while frictions and grasping are made over the uterus externally, you will greatly assist the contraction.

You must understand that, unless the uterus does contract, there is great danger of hemorrhage, but after the contraction is completed there is but little: that is, in the majority of cases.

Another, and the most common danger is that when the labor is going on rapidly, the placenta, which is generally attached to the fundus of the uterus, is drawn down by the umbilical chord, and thus causing inversion of the womb. This condition of the pelvis may be known long before the time of parturition, or it may not be discovered until labor has commenced, or even until after its completion. If the accouchuer is sent for after the labor has commenced, in all probability, it will be finished before he arrives. In this case he must do the best he can, to remedy any evils that may have occurred.

But the pelvis may be too small, and all the relative proportions be perfectly correct. This generally produces no other inconvenience in labor than tediousness in the expulsion of the fetus; unless it is so very small that a common sized head can-

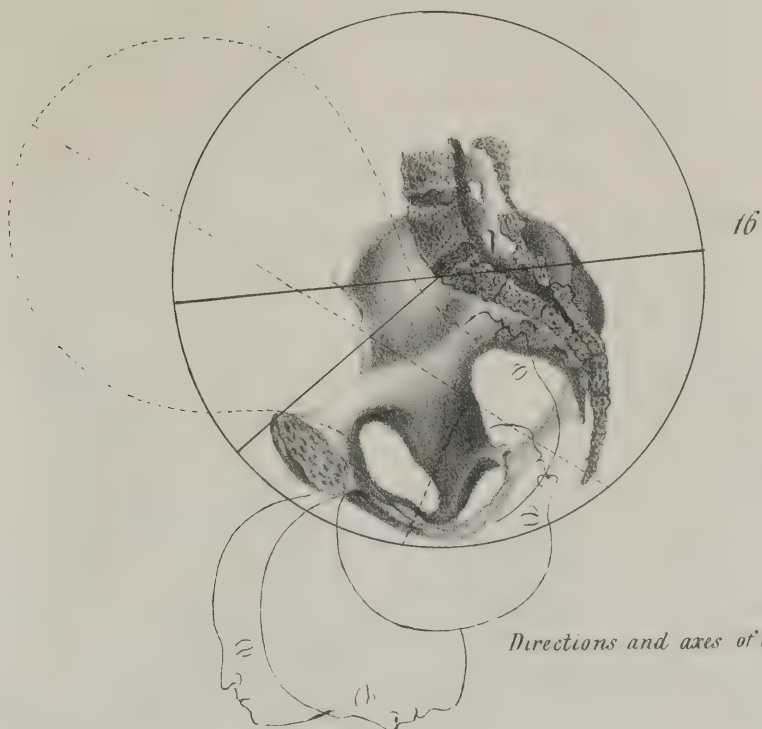
not pass. Although the head may not pass for a long time, yet if the passage is not less than two inches and a half, it may be considered a practicable pelvis, and the labor may terminate naturally, although it may be a difficult and dangerous one. For manner of measuring, see *Plate VI., Fig. 14 and 15.*

A truly deformed pelvis is one in which the *proportions* are lost; where some of the diameters are not of the proper length—some being too small, and some too large. These deformities may have been produced by various causes. They may have occurred in childhood, or they may have come on in after life. Females may have several children, without any difficulty, and afterwards the diameters may change, and produce such deformity as to render it impossible for another natural delivery to take place. Deformities may be produced by rickets, in childhood, or from exostosis, in after life.

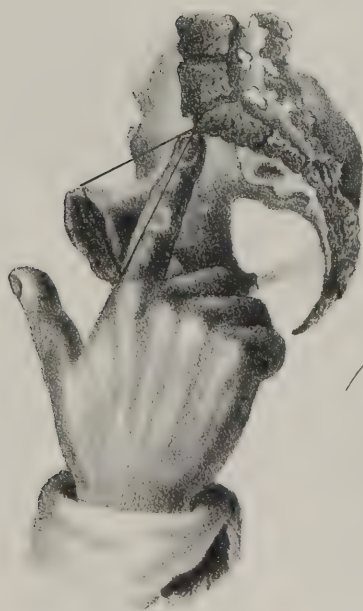
Now, I apprehend that deformities produced in childhood, are not unfrequently the fault of the mother or nurse, where there is no disease; and even if there is disease, it may be attributable to a want of proper management of the child. For instance, allowing it to sit too much on hard surfaces, while quite young: for, since the bones of the pelvis, even if healthy, will assume almost any form by pressure, this is not a strange effect. Mothers should hence understand, that by allowing female children to sit too much on hard substances, before they are three or four years old, deformed pelvises may be produced.

If there is any tendency to rickets, which will be indicated by a tardiness in the closing of the sutures, the parents should see that the child does not sit on hard substances, since while this is the case the bones are soft and yielding.

Where there is deformity, the relative or partial smallness most frequently occurs in the upper strait. It may be in other parts, but it is most apt to occur in the oblique diameters of the pelvis, (as in *Fig. 13.*) It may effect the transverse, or the antero-posterior. If the contraction occurs on one side only, it is very common to find the other enlarged. If the left diameter is too



Directions and axes of the Pelvis



Measurement of the Sacropubic diameter by the index finger.



small the right is too large, and vice versa. But, though this is usually the case, yet it is not always so.

If the occiput presents to that side which is too small, it will be absolutely necessary to turn the child; but if it presents to the opposite side, the labor may go on very well. This fact ought to be well understood, as it will account for cases where females, after having several favorable labors, at a subsequent one, even turning became absolutely necessary to complete the labor.

In the favorable cases, it happened that the presentation of the occiput was to the side that was too large, and, consequently, but little difficulty occurred, but in the other case the reverse obtained.

This will enable you to understand what is to be done and how to overcome the difficulty. If the presentation is to the small side, it will be necessary to turn and manage the labor, so as to bring the occiput to the opposite side, which you can accomplish by the proper attentions and manipulations.

These deformities may be variously combined, various in degree, as well as in form, differing but slightly from the healthy condition of the pelvis, or, to an extent sufficient to render delivery impossible.

As a general rule, in these deformities, the inferior strait is enlarged, in proportion as the superior is contracted; yet both may be contracted. The coccyx may rise up, so as to render the space between it and the subpubal arch too small.

Nearly all the deformities of the pelvis change its planes and the axes. The proper angle between the spine and the sacrum is one hundred and thirty-five degrees, when the individual is erect. The axis of the upper strait is a line drawn from the umbilicus to the middle of the coccyx. When the individual is standing straight, it varies from thirty-five to fifty degrees with the plane of the upper strait, but less when the individual is stooping or lying down. It is largest when she is pregnant, especially when carrying a weight. A large majority of females, when pregnant, lean backward, thus throwing the pelvis forward and making the angle greater. With the unimpregnated, it is from thirty to thirty-five degrees.

LECTURE III.

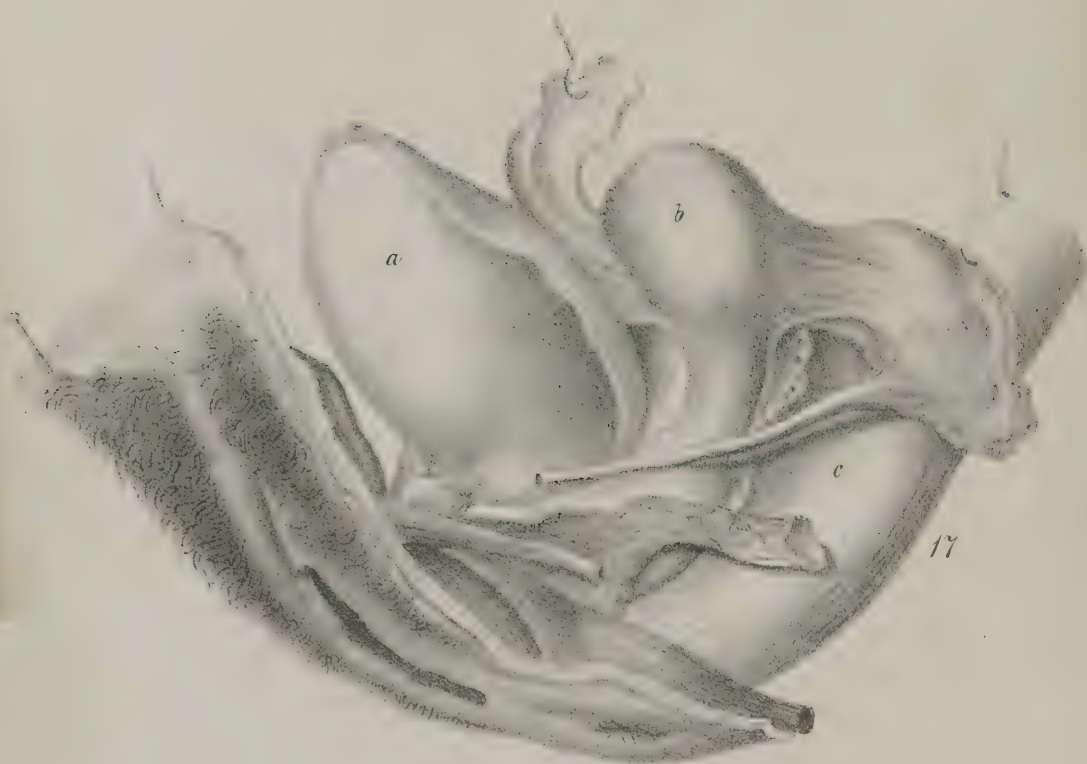
ORGANS OF GENERATION.

(See Plate VIII.)

The next subject we shall notice is, the organs of generation; of which I shall treat briefly. These are divided into two classes: the *external* and the *internal*.

The external organs are known under the general name of Pudenda.

All females have a natural aversion to any mention of the organs of generation by the opposite sex; and we should approach this subject, when addressing a female, in a delicate manner, and with pure and chaste motives. It is the duty of the physician, not only to make himself acquainted with the technicalities employed in describing these parts, but also with the terms made use of among females themselves, so as to make himself understood by all classes. But he should avoid using vulgar technicalities of the common people, except when necessary in order to be clearly understood. In approaching this subject, and in mentioning the diseases connected with these organs to a female, you should talk without embarrassment; for in proportion as you appear to be embarrassed, so will you embarrass her. Nor is it always advisable, when speaking of the subject, to use technical terms; and when in their use you are misunderstood, substitute other words, without waiting for her to ask you what they mean. Nearly all the questions should be asked so as to be answered by "yes," or "no." Watch, and if she does not answer you readily, do not wait for the answer, but immediately use the common term, so as to enable her to understand. For example, if you wish to ask her about *leucorrhœa*, use this term first, but if she



- a* Bladder.
b Uterus.
c Rectum

Internal Organs

hesitates, repeat your question and substitute the term "whites" for leucorrhœa, and she will answer you promptly, and respect you for your plainness. In some circles, you would be thought vulgar to use anything but the terms of the books, while in others, if you use them you will be set down as a mere coxcomb.

The intelligent physician will use those terms best understood by his patient.

I will now proceed to speak of the individual organs of generation:—the external are denominated the *mons veneris*, *labia majora*, *clitoris*, *labia minora* or *nymphæ*; *vestibula*, *meatus urinarius*, *superior* and *inferior commissure*, *vulva*;—in virgins—the *hymen*, and in others the *carunculæ myrtiformis*, the *fossa navicularis*, and *perineum*.

The internal organs, are the *vagina*, (laid open in *Fig. 18*.) *uterus*, *fallopian tubes*, *ovaries*, and the *ligaments*, (which are all shown in *Fig. 18*.)

These comprehend all the divisions of the organs of generation.

Mons Veneris. The *mons veneris* is that cushion-like prominence, located upon the os pubis, which, in the adult, is covered with hair. It is composed of a fibrous and cellular substance with fat. It is very firm in its structure, and contains a large number of sebaceous follicles. It is very prominent in fleshy individuals, and also in some that are lean. In the latter case its prominence is owing to the projection of the bones. When inflamed it is extremely painful, the *firmness* of its structure preventing swelling, and when pus is formed, you should puncture early in order that it may escape, and you will thus relieve the excruciating pain.

Vulva. The opening at the genital fissure is called the vulva, extending from the symphysis pubis to within about an inch of the anus.

Labia. The labia are thick fleshy portions, extending from the thighs, and situated on each side of the vulva. These are

composed of a similar structure to that of the “mons veneris,” and also contain mucus follicles.

The *superior commissura* is the junction of the labia above the genital fissure,—the *inferior* is the junction below it.

Nymphæ. The nymphæ, or internal labia, are two folds of the lining membrane of the external labia which commence at the superior commissura, and terminate above the inferior commissura, on each side.

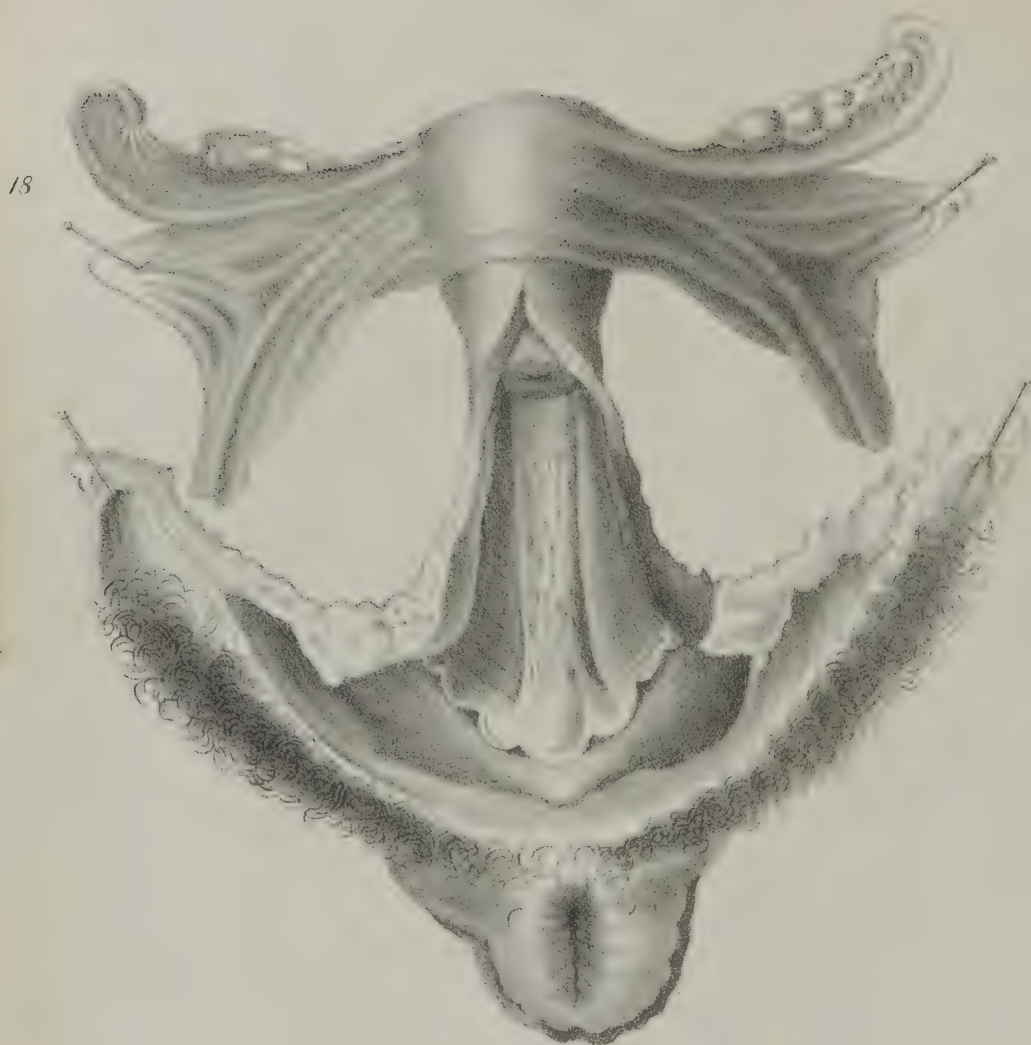
Vestibule. The vestibula is a triangular space situated between the superior portion of the nymphæ, at which point it commences and extends down to the vulva.

Clitoris. The clitoris is a prominence, just below the superior commissura, situated on the pubes; and in some respects resembles the head of the male penis. It is usually about half an inch long; but, in some instances, it has been found so large as to prove very annoying, and to require amputation. The vestibule commences its outlines at the clitoris, just below the superior commissure of the labia, and extends down to the vulva, and is that portion inclosed between the nymphæ on each side, and between the clitoris and meatus urinarius above and below.

Urethra. The urethra extends from the meatus urinarius (mouth of the urethra) at the superior opening of the vagina to the bladder.

Hymen. The hymen is a membrane enclosing a part, and sometimes the whole of the mouth of the vagina, and having an opening for the escape of the catamenia.

It is usually crescentic with its concavity downwards, only enclosing a portion of the mouth of the vagina; it may be naturally imperfect, or entirely wanting, and hence is not to be absolutely depended upon as a test of virginity, although, as a general rule, its perfect state is presumptive evidence of



Internal Organs .

chastity. On the other hand, however, as is intimated above, the fact that in some instances natural defects exist, it is not just to conclude that the defective hymen is positive evidence of sexual intercourse. For it must be observed, that the hymen is often ruptured in childhood. It is sometimes of an inordinate thickness or firmness, and, in very rare cases, will even require the use of the knife, before copulation is practicable; or, when pregnancy may have taken place, from imperfect coition in this case, it is certain that more or less obstruction will be found in the delivery of the child.

Carunculæ Myrtiformes. What is meant by the *carunculæ myrtiformes* is simply a granular appearance on the sides of the vagina from the remains of the ruptured hymen.

Fossa Navicularis. The *fossa navicularis* is a small cavity situated at the posterior part of the external orifice of the vagina between the *carunculæ* and the posterior commissure of the external labia, termed the *fourchette* or *frenum*. It is very difficult for this latter part to resist the pressure of the child's head at delivery, but its rupture is not of much consequence unless considerable laceration of the perineum may also be involved.

Perineum. This is the space between the posterior commissure and the anus. It is marked by a longitudinal suture called *raphe*. The perineum is common to both sexes, but is less in the female than in the male.

We come next to consider some of the difficulties which occur with respect to some of these organs, and also to give a more full description of them, thus combining useful directions with mere description.

The labia were described as being those fleshy portions on each side of the genital fissure, extending from the thighs and uniting at the superior and inferior commissures.

It frequently happens that these parts are injured in labor,

especially when instruments are employed. In cases of lacerations or bruises of these parts, it is important to use means to prevent inflammation, as suppuration is very apt to follow in this tissue.

Cold water is the most simple means for such cases, and may be employed by means of cloths suitably wetted and applied, repeating the wetting as often as they get warm.

The tincture of lobelia or of gelseminum is very good in this case. The application of this means is topical.

The diluted tincture of the marygold flowers (*Calendula Officinalis*.) or, what is perhaps better, the fresh cold infusion of the bruised flowers is very superior. In the absence of other means, the parts should be oiled to protect them from the air.

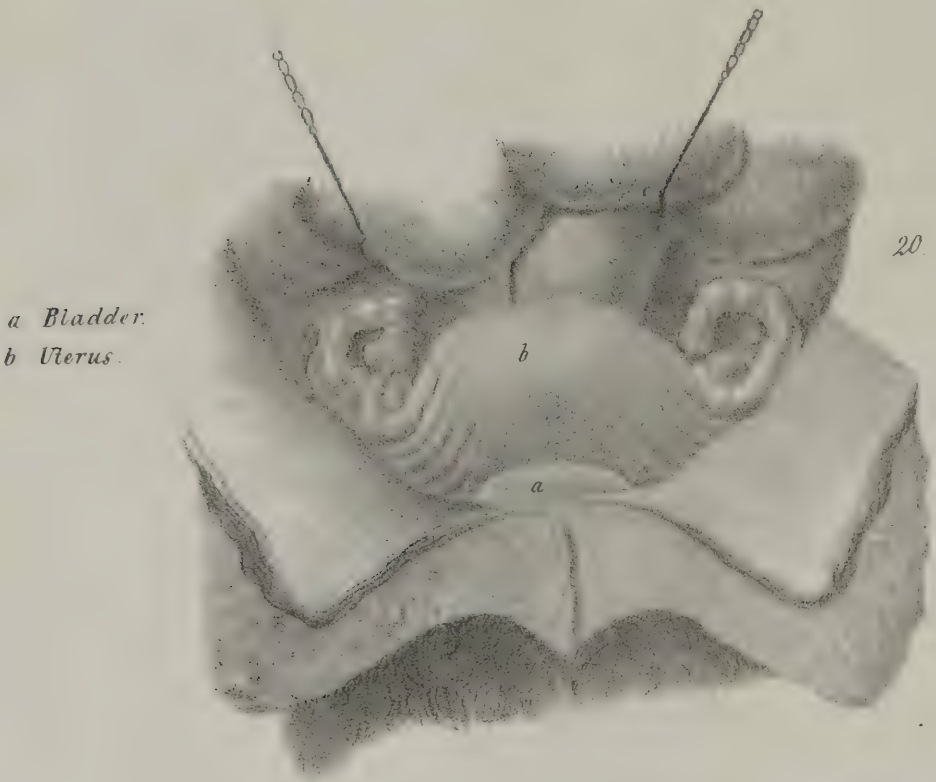
Poultices and warm applications should be avoided in the early state, and only resorted to when it is evident that suppuration must ensue. In cases where the laceration is very extensive, it is always best to take three or four stitches with a suture needle, or confine the edges of the wound with slips of adhesive plaster.

Another important matter is to guard against adhesions of the labia. When the lacerated parts come in contact they are apt to adhere, and thus be joined in healing. When mucous membrane intervenes there is no danger of this, but where it does not, the lacerated parts, compressed together by the swelling, should be protected by the interposition of lint, or delicate strips of linen. It is always necessary, in cases where there is much inflammation, to keep the bowels loose. A purgative, such as cream of tartar, castor oil, salts and senna, or something of this kind is advisable; but if the bowels are in a good condition, it is best not to disturb the patient with frequent necessities to rise, as in the operation of a cathartic. In lieu of the cathartics, it often answers equally as good a purpose, to keep the bowels open with injections composed of warm water and salt, or warm gruel and oil.

We now come to the description of the internal organs, which is of more importance to the accoucheur than that of the external :



Uterus.



*a Bladder.
b Uterus.*

Relations of the Uterus with the Bladder and Rectum

Vagina. This is the muscular, membranous canal which connects the external with the internal organs of generation, leading from the vulva to the uterus; the direction of which corresponds very nearly with the axis of the pelvic cavity. It is generally longer in those who have never borne children, than in mothers. And is shortest between the third and fourth months of utero-gestation. The vagina is bounded externally, by the vulva; posteriorly, by the uterus; in front, by the urethra and bladder, and behind, by the rectum, to which it is connected by the recto-vaginal septum. It is also connected with the bladder by the visico-vaginal septum; laterally it is bounded by the walls of the pelvis. It is generally about an inch in diameter, though irregular in its size. The walls of the vagina are always in contact, so that there is no open space; but it is capable of being greatly distended, as is seen at parturition, permitting a large child to pass through. Its interior surface is lined by a mucous membrane which is well supplied with mucous follicles, the office of which is, to secrete a peculiar fluid which serves the purpose of lubricating the parts; and, from a wise provision of Nature, this secretion is abundantly supplied at the time of labor. This internal surface is not smooth, but disposed in the form of transverse rugae anteriorly and posteriorly, which renders it capable of very great distension. Its posterior extremity is attached around the neck of the uterus, and thus forms a circular groove, or cul de sac. (*See Fig. 18 and 19.*) In early life it is of a pink color, but, as the individual advances in age, it becomes of a darker hue.

LECTURE IV.

THE UTERUS.

(See *Figures 19, 21 and 22.*)

This organ is pear-shaped, with the small end downwards, compressed antero-posteriorly, and rather flatter in front than behind. It is about two and a half inches long, from the edge of the lips to the fundus.

In width, laterally, it is about an inch and a half; that is, measuring above a line drawn from one fallopian tube to the other. It is divided, for the sake of convenience, into a fundus or base, a cervix or neck, and a body, embracing the intervening portion. Its use is to receive and nourish the ovum, and to expel it, when it has attained to its proper or mature size, being, *by no means* an organ of conception, but of *gestation*.

Its situation is in the cavity of the pelvis, in front of the rectum, behind the bladder, and below the small intestines, and superior to the vagina. It is connected to the rectum by a fold of the peritoneum. Laterally, it is connected to the walls of the pelvis by a fold of peritoneum called the broad ligaments of the uterus. (*See Fig. 20.*)

The long diameter of the uterus is parallel to the superior strait of the pelvis. It forms an obtuse angle with the vagina, this being more nearly horizontal than the uterus. This angle varies in proportion as the different straits of the pelvis differ. (*Figures 21 and 22 show cut sections of the body of the womb.*)

The uterus is a hollow muscle, with fibers running in all directions. This is proved by the fact that it has the power to contract in all directions. But it is found to have classes of fibers,

running in longitudinal and circular directions. There is a dispute, however, among physiologists and anatomists with regard to the exact structure; yet all agree, that the longitudinal and circular fibers exist.

In parturition, if the contractions are proper, all the fibers of the uterus contract equally; but it not unfrequently happens that one part contracts, while the other is relaxed; and, in such cases, some time elapses before all the fibers contract at once. For example, the neck will give way first, while other parts remain contracted, showing, most conclusively, that there are two sets of fibers in the muscular structure of the uterus. The principal matter of dispute has been, whether these unequal contractions are produced by two distinct sets of muscles, or only one set of muscles with two sets of fibers.

The uterus is abundantly supplied with blood vessels from the hypogastric and spermatic arteries, and in a gravid condition seems to be a complete network of arteries and veins. Its nervous filaments are drawn from the great sympathetic nerve, from whence arises that intimate sympathy which exists between this organ, the brain, and stomach. When we have unequal contractions of the uterine fibers the labor is retarded; but when all the fibers contract equally, and simultaneously, the labor is expedited. This equal and simultaneous contraction of all the fibers is called the tonic contraction of the uterus. It occasionally happens that these contractions do not take place for some time after labor has commenced. Parturition will then be tedious. When this occurs, however, we can do much in regulating the pains, by a proper exhibition of remedial agents. A sitz bath, pleasantly warm, of from ten to fifteen minutes, will often prove beneficial—but if this should not produce the desired effect, give from four to six grains of caulophyllum, or three grains of macrotin, repeated as occasion may demand. Should the uterus not respond to these means, nauseants, in connection with stimulants and nervines, may succeed. Or, what is better still, give the third preparation of lobelia, (antispasmodic tincture,) in doses of one teaspoonful every twenty or thirty min-

utes, until the tonic contractions of the uterus take place. A stimulating enema, per rectum, composed of composition or diaphoretic powders, (for formula, see *Kost's Minor Practice of Medicine*, page 597;) valerian and herb of lobelia, one teaspoonful each, into half pint of warm water; give one-half or one-fourth of this at a time, and repeat as often as the symptoms demand. This course will, at least in the majority of cases, regulate the pains, and expedite the labor to a happy termination. If emesis takes place, no harm will be done; indeed, the happiest effects often result in such cases from the administration of nauseants to the patient until active emesis is produced.

It has been supposed that nausea will arrest the contractions; and it is true that such will be the result, where such agents as antimony, etc., are used; but lobelia will not.

In most cases, it will be sufficient that lobelia be given in small and frequent doses. If the patient is much fatigued, and there is not sufficient dilatation of the os uteri, she ought to have rest. If she is so inclined, let her go to sleep, and after she has rested awhile, the regular contractions will come on again.

After the birth, though the uterus may have been greatly distended, it will be but a few weeks before it assumes its usual form, and become dense, firm, and elevated in the pelvis.

THE FALLOPIAN TUBES.

(See Figures 23 and 24.)

These are two small cylindrical canals, four or five inches long, attached to the fundus of the uterus, and extending out, on each side, and terminating in a fringed extremity, called fimbria, near the ovaries. They are inclosed in folds of the peritonæum. These tubes are about the size of a goosequill.

The opening into the uterus is about as large as a darning-needle, but at the outer end is not larger than a bristle. (See *Fig. 23*, where a section of the uterus and the tube is shown.)

There seems to be one of the fringes rather hard, and larger than the rest; it is supposed that this is a continuation of the tube, but so small as to be difficult to distinguish. These tubes

are not directly connected with the ovaries, but open into the cavity of the uterus. They only become connected with the ovaries at the time of copulation, but after impregnation they continue their hold on the ovaries, until about the sixth month, and sometimes till the seventh, at which time the connection is discontinued.

The use of the fallopian tube is to convey the ovum, or germ, to the uterus for its future development. (In *Fig. 24* is seen one of these tubes in a state of pregnancy.)

THE OVARIES.

(See *Figure 25.*)

The position of the ovaries may be seen in figure 18, where they rest upon the ligaments at the top of the cut; also in figure 20. Figure 25 presents a single ovary excised.

The ovaries are two whitish oval bodies, flattened antero-posteriorly; ordinarily an inch in length, half an inch in width, and one-fourth of an inch in thickness; one on each side of the uterus, and connected to it by ligaments of their own, enclosed within the broad ligaments. They receive their outer coat from the peritoneum, which is called the *Indusium*; next to it, we have their own proper covering, the *tunica albuginea*, a dense fibrous membrane, and within, a cellular tissue called stroma, containing within its interstices the graffian vesicles, or *ovisacs*; never less than ten or twelve in number. They are being constantly secreted. These ovisacs have two separate tunics; the outer one firm, fibrous, and vascular; the inner one less firm, and by some supposed not to be vascular. And still within this internal tunic of the ovisacs, we find the ovum imbedded among a mass of granules, floating in an abumanoid fluid. In the mammalia, these ova are identical with the yolk of the eggs of the oviparous animals: differing only in being destitute of their albuminous fluid and calcareous shell. To recapitulate inversely, we have the *ova* within the *ovisacs*; the *ovisacs* within the interstices of the *stroma*; the *stroma* within the *tunica albuginea*, and that within the *indusium*.

These little eggs are about the fifteenth of a line in diameter; in the center of a number of these agglomerated together, is the germinal spot, some one or two hundredths of a line in diameter. This is the true yolk, ball, or *germ*.

In each ovary there may be the rudiments of hundreds of human beings. But we shall explain this more fully when we come to speak of menstruation. At each menstruation one of these germs, if not impregnated, passes off and is lost. From this it is evident that they must be very numerous, or constantly secreted: otherwise, there would soon be none left.

I will now present a few facts in reference to (what is called) the *corpus luteum*.

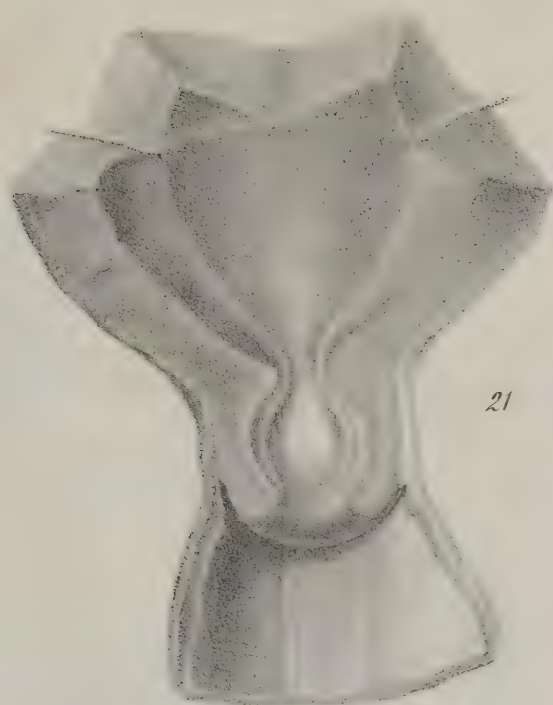
This is a yellow body in the ovaries of females who have menstruated. It was formerly thought to be an evidence that the woman had been impregnated, but it has been proved to be nothing more than evidence of her having menstruated. It was not known formerly that at every menstrual period an ovum of the unimpregnated female detached itself and passed off; so, a woman never having been subjected to copulation will, nevertheless, have the *corpus lutea*.

THE BROAD LIGAMENTS.

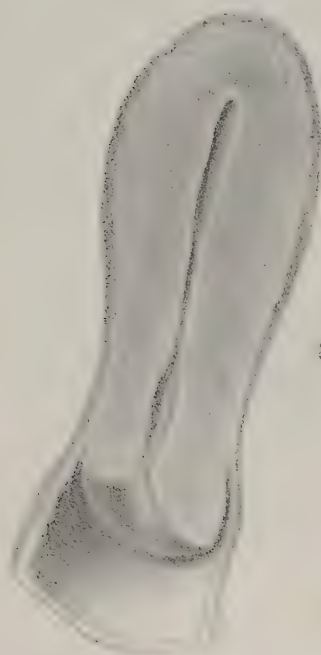
(See *Plate IX.*)

The broad ligaments at the uterus are those reflections of the peritoneum covering the uterus in front and behind up to the vagina, and pass off to the walls of the pelvis against the edges of the superior straight. The *round ligaments* are muscular chords or ligaments in front, and a little below the fallopian tubes, passing out under Poupart's ligament, at the same point where the spermatic chords of the male do, and loose themselves in the labia and mons veneris. These assist to preserve the uterus in its proper position.

They are elongated in a state of pregnancy, when the uterus rises up. By this elongation the uterus is suffered to fall lower down after delivery, than before impregnation.

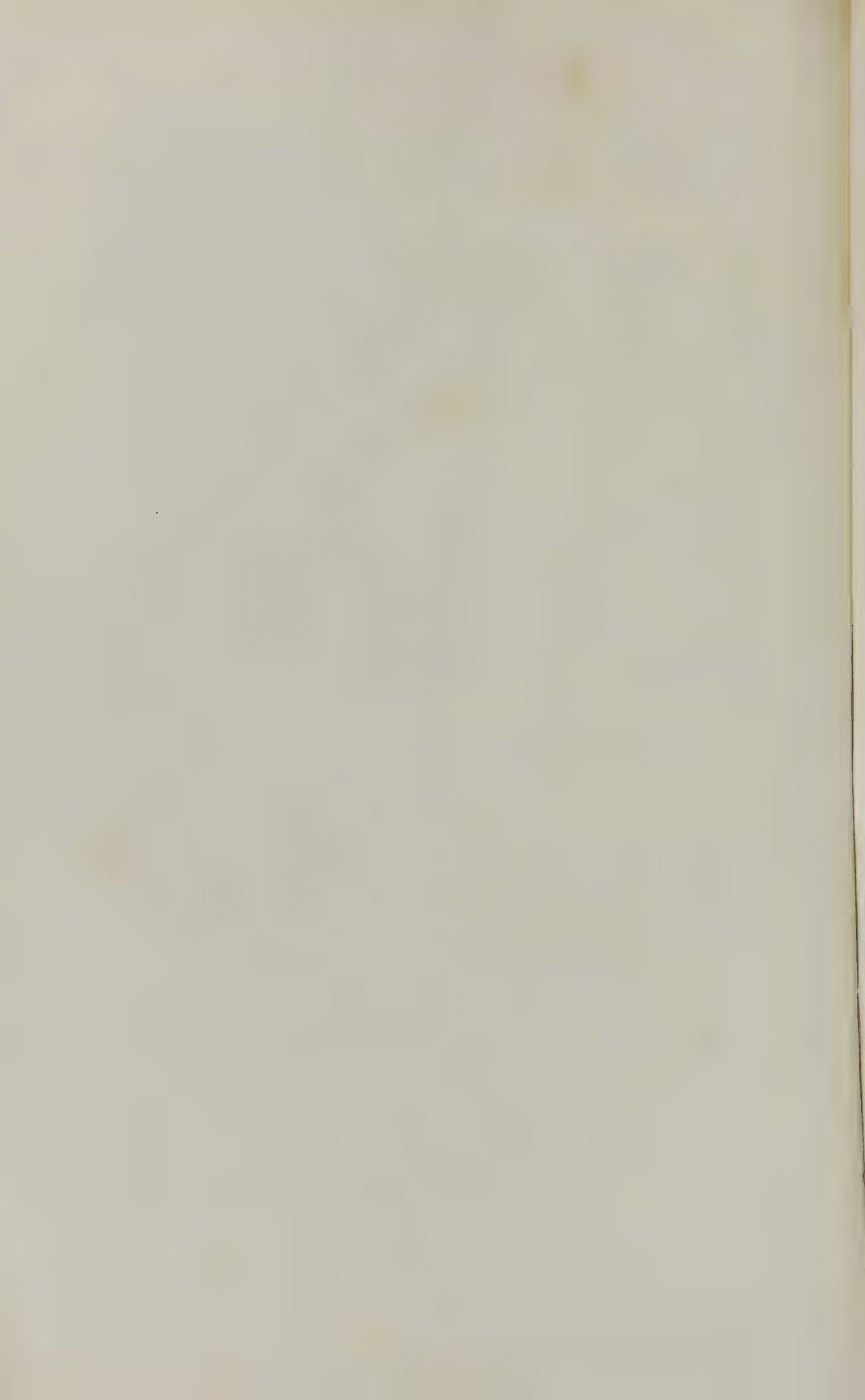


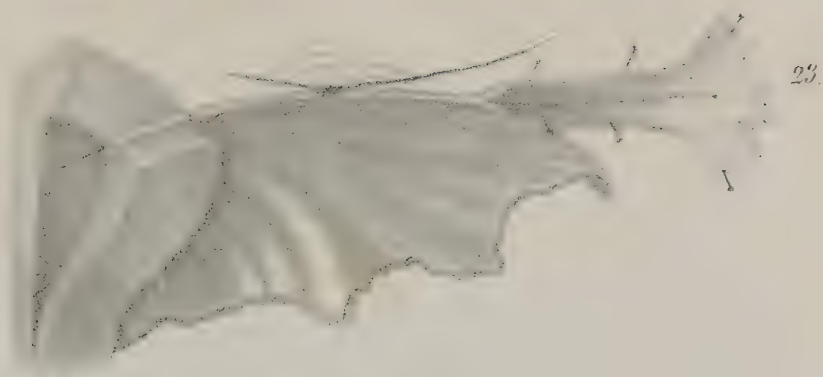
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Interior of the Uterus

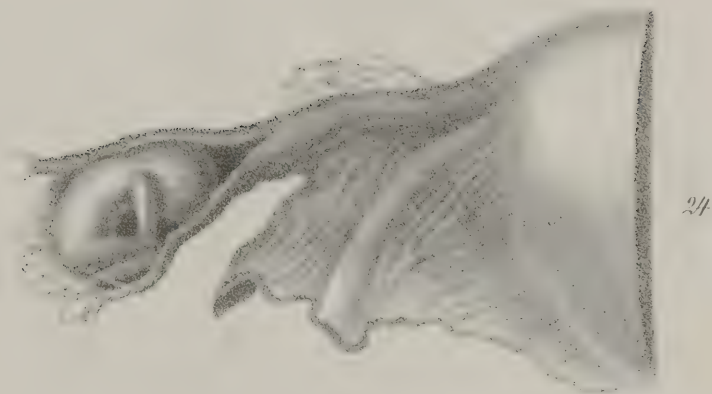
22

tical section of the Uterus

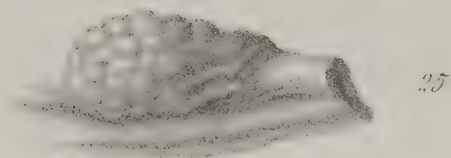




Fallopian Tube



Fallopian pregnancy



Ovary

LECTURE V.

FUNCTIONS OF THE FEMALE ORGANS OF GENERATION.

MENSTRUATION.

The uterus of the female child is about the size of a man's little finger; this is rather an odd comparison, but it is the one that has generally been used by others, and it will be found the uterus, in different children, varies full as much in size as the little finger of men. At any rate, the uterus of an infant is very small, in comparison to other parts of the body. It does not seem to increase in size, in proportion to other parts, previous to puberty. It is rather pale, soft, thin, and yielding.

The ovaries are also extremely small in children, whereas in the adult, they are as large as a chesnut, and sometimes much larger. These organs are not only small in childhood, (and when I speak of childhood, I mean from infancy to the age of puberty,) but seem to perform no function whatever. A girl may have arrived at the stature of the woman, but until the age of puberty, she is incapable of conceiving, though she should have sexual connection. At the age of puberty she undergoes a great change, both in her personal appearance and in her sexual organs. She looks more like a woman in every respect. Her pelvis becomes enlarged, her breasts are fully developed; she has also more rotundity of form. A short time after these changes have taken place in her appearance, she begins to feel pains and an uneasy sensation in her loins. She feels a sense of fulness in the head, with some excitement of pulse, and a hot skin. These symptoms may be followed by the discharge from the uterus, or they may subside without it; however, if she be healthy, they will return; and after a few hours the discharge will take place; at

first light or pale colored, and finally it becomes tinged with red, and gradually takes almost exactly the appearance of blood. MEIGS and some others contend that it is really blood, but it is now regarded as a peculiar secretion of the uterus.

The first *catamenia* continues but a short time, usually not more than twenty-four or thirty-six hours, and leaves the female in her usually healthy condition. It may return in a month, but in the majority of cases it is more than a month from the first appearance of the catamenia to the second, and sometimes two or three months may elapse, and no bad consequences follow. It finally becomes remarkably regular and returns with notable exactness every twenty-eight days. If the term between the first and second period runs over the proper time a few weeks, or for several months, or if at several periods it runs over the time, and there be no symptoms of ill health connected with it, no particular attention is necessary; it is only evidence that she is not yet fully developed—that she has not yet become sufficiently formed by nature, to menstruate regularly at the end of each month. But if she manifests any signs of ill health, *means* must be employed to bring about the desired regularity. If after the regularity of the periods becomes fixed, there is any change, it is almost invariably attended with mischief, unless it arises from pregnancy or suckling.

A suspension of the menses occurs during pregnancy and usually during nursing. I will not use the term *suppression* in this case, for that should convey the idea of an unhealthy state, and pregnancy and child-bearing are not such. It is a well-established fact that those women who have borne most children are much the longest lived. Show me a woman a hundred years old, and I will show you one with many children, and so it is with men. If the female be healthy the symptoms which I have mentioned as preceding the menstrual flow are very slight, or entirely wanting. There are many healthy women who have no pain at all connected with this discharge.

The catamenial discharge is undoubtedly from the uterus; yet this has been a matter of dispute among authors. But the fact

that it is arrested at the time of pregnancy, is the strongest possible proof of its coming from the womb; and post mortem examinations have shown the flow to have emanated from the internal surface of the uterus. There are, however, a few individuals who menstruate during gestation, and this must be accounted for from the supposition that the secretion is from the interior of the neck of the uterus.

As to the cause of menstruation, I have but little to say. It is about as sensible to dispute about the cause of the catamenia as it is to talk about the cause of perspiration, the secretion of urine or saliva, or any of the secretions. The menstrual discharge is a natural function belonging to every human female. The reason is simply *because* she is in a natural and healthy condition. That is all we can say. You may theorise as long as you will, and no more plausible explanation will be attained. If you undertake to say that it is any thing aside from her natural function you must go beyond what previous volumes have given us on the subject. It is true the male does not menstruate, but it is only because he is not constituted for it. I shall just say, it is one of the natural functions of woman for a certain purpose, connected with the function of generation.

The quantity of fluid discharged is, ordinarily, from five to eight ounces, yet this varies considerably, in different individuals. The duration varies from three to five days, but is found in some not to extend over forty-eight hours, while with others it continues seven or eight days, and still they appear healthy. But, generally, if it falls short of three days or extends over five days it is unhealthy.

The age at which the menses makes its appearance, in this climate is from twelve to sixteen years. We might put down the average age at fourteen. Many diseases do not interrupt the discharge, while others do. In some individuals diseases will interrupt it, which in others will not.

Menstruation generally ceases about the age of forty-five, provided it commenced at about fifteen. If it commenced at an earlier period, it will end earlier, and if at a later age it will con-

tinue later. It generally continues until the female is about three times the age at which it commenced. Few except scrofulous individuals arrive at puberty as early as twelve, in this climate, and in such cases it is apt to cease before forty. About thirty years is the usual time of the continuance of menstruation, but this varies very much. When it begins to terminate it is irregular, running over a few weeks, a month, and sometimes more. After it has entirely ceased for many months and sometimes for years it may, in rare instances, break out again.

As the catamenial period terminates, the breasts become shriveled, and the ovaries shrink away. The uterus becomes hardened and the power of conception is lost. It is very rare that women conceive after the period of from forty-five to fifty years.

It is more difficult for the practitioner to get the history of any deranged state of menstruation than of many other forms of disease, as females are generally reluctant in giving details of their experience in regard to their sexual system.

Much can be judged from the general appearance of the patient. If she is of a sanguine temperament, and robust constitution, there will be a feverish state at the menstrual period, which will continue for a few days afterward. The patient also becomes irritable and excitable, and complains of a sense of fullness in the head, and sometimes the chest also. There is headache, and restlessness. But the most marked evidence of retained, and especially of obstructed menstruation, is pain in the back or loins, which is often quite severe.

In retention of the menses for a considerable period, there is generally more or less constitutional sympathy. The spirits become depressed, and the patient will evince signs of physical suffering.

The nervous system becomes implicated, in the course of time, and there are sometimes signs of hysteria, and mental derangement. Yet mostly, the signs of nervous disturbance are only shown in dejection of spirits, and a want of the usual vivacity.

There is much art in the manner by which we may, with the greatest facility, obtain a voluntary detail of the symptoms from

the person thus affected. The main particular necessary is to let her know that you have a real sympathy for her case, and that your inquiries are strictly professional, and partaking in no degree of the character of mere curiosity. As, by degrees, you gather her symptoms, you must endeavor to let the importance of the case suggest the propriety of frankness, on her part. But this must always be done as much by the manner of your address, as by the language employed. Yet the language after all, requires precision. Let her infer meaning when she cannot be mistaken; but do not give her a chance to misunderstand you. Her own language and manner of conversation will give the best or most successful suggestion of the way you are to approach her.

If you use plain language in inquiring after her menstrual condition, you will always be understood. I generally ask in this way: whether she has been "*regular*;" whether she has had her "*monthly courses*," or "*turns*" regular, and I seldom fail to be understood.

Females in cities menstruate much more profusely than in the country, as a general rule. This is owing to the different modes of living. The temperate climate is much more favorable to reproduction than very cold climates. As I remarked before, the commencement and cessation of the catamenial period varies greatly in different climates. In cold countries it does not appear so early as in temperate, but in the countries of the torrid zone it appears much sooner than in the temperate. In Persia, India, and parts of Asia, the common age of puberty is from nine to ten, while in Labrador and Greenland it varies from twenty to twenty-five.

I might spend a long time on the peculiarities, variations, and anomalies of cases of menstruation; but as this is a matter of no practical importance I shall leave the subject. Although I have given you these statistics as to time, and as belonging to the healthy condition of the female, yet there are individuals who appear to be healthy, who menstruate once in two weeks or once in two months. These cases are frequent in

Southern latitudes. There are some who run over the time two weeks, while others fall short, but where they fall short they are more apt to be unhealthy. Indeed, generally speaking, it is an evidence of bad health. There are others whose menstrual periods last not more than twenty-four hours, while others have it from six to eight days. These are exceptions to the general rule.

Women who vary from the regular time of twenty-eight days are not so apt to have children. If they fall short they are apt to abort, while those who run over the time are not apt to become pregnant at all, yet in these cases they *may* bear children, and many do.

LECTURE VI.

CONCEPTION.

The next subject we shall notice is that of Conception and Pregnancy. This is a subject about which there is, and perhaps ever will be, much mystery. But, though the subject is, to a great extent, involved in uncertainty, yet it is necessary for the practical physician to investigate every thing of importance in connection with this matter.

It is a subject upon which physicians have ever been amply interested from the earliest history of medicine; and, indeed, what can be more interesting and important to us than that process by which we are brought into existence, and constituted living, conscious beings.

Though this subject has been investigated for many ages past, no satisfactory conclusions have been arrived at as to its ultimate cause; and as to solving the mysteries which are connected with it, I shall not attempt it, but simply state a few things which are known to exist—and a few which are supposed to exist, but shall not consume much time upon uncertainties, and suppositions. As I have before remarked, you can indulge in that pursuit at your leisure.

Generation is a function of living beings for the reproduction of their species by the union of the sexes, or certain properties produced by one or two organized beings; some living beings possessing both male and female organs.

This is the case with some plants, also with the snail; yet, although the snail has both male and female organs, it is incapable of producing offspring alone, but two of the animals will impregnate each other, and both will conceive. In the

mammalia the semen is a substance peculiar to the male, and probably under the proper circumstances at copulation, impregnates the germ in the female.

There are various views as to the cause from which the future being emanates. Some contend that it is produced and originates entirely from the male; others, that it comes from the union of a substance in both the male and female; others, that it originates entirely from the female;—that there is no substance whatever from the male. But the hypothesis of the Graafian vesicles, that is the ovum or egg, is the one, perhaps, which is most favored now,—that the substance contained in the ovaries is really a germ—that the ovaries are egg-bags. It was supposed by some that the semen of the male contained a vast number of animalcules, and that one or more of these was conveyed through the fallopian tubes to the uterus and there became the fetus, and that the female performed no other function than that of nourishing the germ till it reached a sufficient degree of development to be expelled. Others suppose that the ovaries were bags containing the female semen, which served to stimulate the germ, from the male, to its growth and development. Those who favor the Graafian or egg doctrine, founded on the ovaries, consider these the real germs of the future being—unconnected entirely from any substance transferred from the male; and that the male semen serves but to stimulate the germ and cause it to grow. This theory of the ovaries is pretty well settled as the true one by most physiologists. It is supposed by some that there is a stimulating influence of the male upon the ovum imprinting the features of the father upon the child, which takes place at the time of copulation. Whatever may be true or false respecting this theory, it is certain that without the existence of the ovum in the female she will never conceive, and it is also ascertained that without the semen secreted by the testicles and thrown into the vagina of the female at the time of copulation, no impregnation can take place, and no future being deposited in the uterus. It is also ascertained that when a male and female

15 days

27 days

40 days

2 months



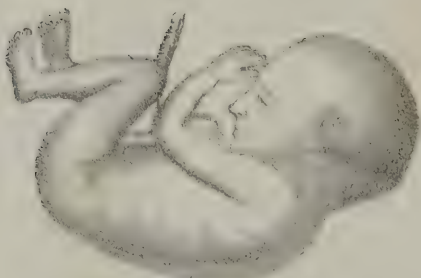
3 months

31



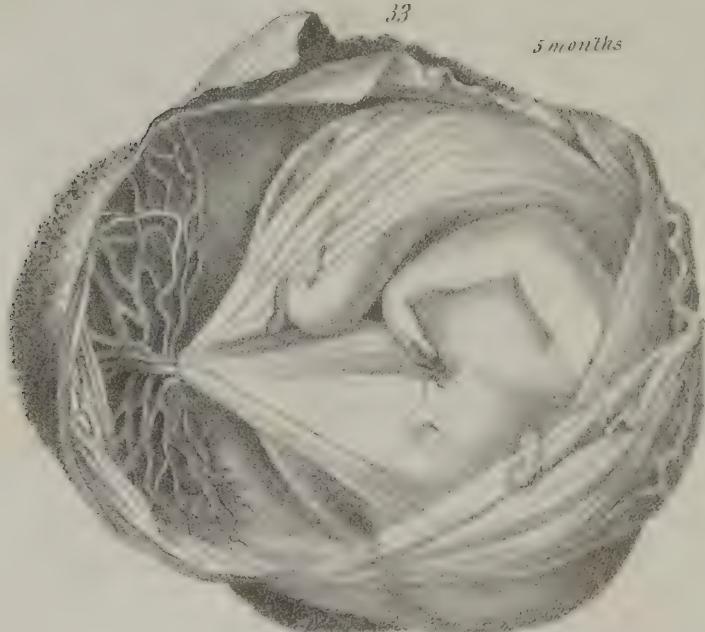
32

4 months



33

5 months



have connection and the semen thrown into the vagina, the ovum becomes impregnated and fecundity takes place; as to the fact of this matter it is settled. And still further, it is settled that before the age of puberty, while the female organs are yet immature, no ovum ripens or matures, but that at the age of puberty, and from that time on to the time when the menses cease to flow, they continue to become mature. It is also a well-settled fact that the ovary is matured periodically and regularly and at no other time—that in the regular individual one is ripened or matured at the end of every twenty-eight days, that is, once in each lunar month; and that whether impregnation takes place now or not, the office of that ovum is performed, and it passes off while others succeed. It is supposed that these are secreted by the ovaries, so that an exhaustion of the supply is impossible. An evidence of this is found in the fact that in animals which have only one period in a year, have this germ at that time and none can be found at other times. Take out the ovary at this period and you will find the germ, but at other times nothing of the kind can be detected. Then, of course, the germ must be secreted about this time, and ripens and passes off. Now during the whole menstrual period they continue to ripen, and the individual is liable to be impregnated if she be exposed at any time during the menstrual period, but she is much more susceptible to impregnation just after menstruation. It seems that the ovum does pass off, yet at any time it is supposed that she can be impregnated. During the last days of the development of the ovum there is an excitement of the circulation in the ovaries, and also an increased amount of nervous energy in the parts. There is an engorgement of the parts, and the fluid which they contain passes off into the uterus, at the proper time, through the lining membrane of the uterus, an insensible yet active excretion.

But this does not show the causes, they are only facts, and I do not know that causes are of any practical importance.

We will now notice the changes produced by pregnancy.

What is meant by the term pregnancy is the development of the embryo or fetus in the womb. It comprises an account of all the changes which take place from the time of fecundation up to the time of its full development. The changes are those which are noticed in the ovaries, the formations in the growth of the fetus, the changes in the uterus, etc. We might divide these changes into fecundation, conception, and gestation. The first change is the fecundation of the vesicle, or that change which is produced upon the ovum causing its growth; conception is the reception of the ovum in the uterus; and gestation is its nourishment in the uterus from the time of conception up to the time of delivery.

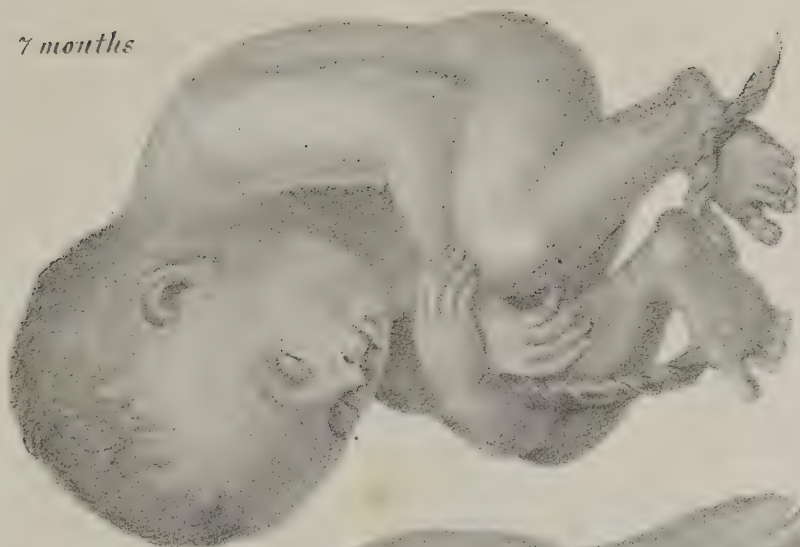
At the time of successful copulation, a vesicle, or ovum being fully developed, has made its way near the surface of the membrane which covers it, becomes ruptured, and the ovum enters the fallopian tube and makes its way along the fallopian tubes to the uterus. But in rare instances the ovum may stop any where along the fallopian tube, and grow, or it may be dropped by the fallopian tube and grow; when this is the case, it is called a false conception, (*see Fig. 24.*)

At the time of fecundation or impregnation, a plastic lymph is thrown over the internal surface of the womb, and a lining membrane covers the inner surface of the uterus, so as to enclose like a sack the cavity of the uterus. The ovum, as it comes along the fallopian tubes and passes into the uterus, is obstructed by this membrane, but pushes it before it. A portion is reflected over it while the other portion remains attached to the uterus, so that it passes to the other side of the uterus.

This layer is called the decidua, or the caducus membrane; called by the latter name because it passes off. That portion which covers the ovum is the deciduary reflex, and that which attaches to the walls of the uterus, the deciduary utera.

The ovum when it passes into the uterus has other envelopes besides this temporary covering; there is the outer covering called the chorion and the amnii.

34

7 months

35

9 months

When the ovum arrives at the uterus it attaches itself to some part of it, generally near the fallopian tubes.

The chorion or outer coat is composed of membrane, with its internal surface smooth, but externally it is covered with a fine villi resembling velvet. It is through the medium of these fibers that it becomes attached to the walls of the uterus, and this attachment is afterwards made the placenta. As it is found to hold this position, or becomes attached to this part.

The term of pregnancy is nine months, during which time the fetus is gradually developed. The figures in Plates XIII and XIV give a history of the fetus during the time of pregnancy.

LECTURE VII.

Pregnancy, though a natural state, is nevertheless liable to be attended by many disagreeable symptoms and accidents. The worst of the accidents is abortion. The fruit of the womb, like that of the tree, is not safe when it is formed as a germ upon its receptacle. Fruit-trees generally cast more than one-half of their fruit in the incipient stage, soon after flowering. This is from a want of sufficient vitality on the part of the parent to mature all the impregnated germs. Thus, the power of germination is greater than the power of gestation.

In the human species, we find, likewise, a large proportion of conceptions to be futile ; but, in this case, we find that the fault is much dependent upon the conduct of the parent, and less upon the want of vitality, or other powers of the constitution, for the maturity of the offspring. Pain in the back and lower part of the abdomen, attended, or not, with sickness at the stomach; and especially if this pain should be persistent, and occur at short intervals, and increase long in severity, and should they continue to simulate true labor, abortion may be apprehended.

If you have a case which presents these symptoms, and thus simulate true labor, but at a premature period, you may justly suspect abortion. You must then use the most reliable means to prevent it. If the patient's stomach is deranged and she experiences nausea, administer an emetic. You need not fear this measure, if you use the proper means to effect it. Lately, in a few cases, I have used the extract of lobelia which has recently been recommended by Prof. Kost, of Cincinnati. I give from five to ten drops at a dose, repeated every fifteen or twenty min-

History of Pregnancy

Natural State



3 Months



6 Months



9 Months



utes. Begin with five drops and increase one every dose until vomiting occurs; then you might follow this, after the stomach is settled, with an anodyne. I give a strong infusion of the *Helonias Dioica*. This has invariably arrested these pains. I have used this for the last three years. If you have not the extract of lobelia, use our common emetic tincture, made of lobelia, sanguinaria, and *Ictodes Foetida*. You may use almost any emetic of which lobelia is the principal agent, and need not fear any difficulty at any time during gestation, while it is invariably followed by good effects, provided it is given with care, and not in too large doses; give it in broken doses, at intervals of from fifteen to twenty minutes, increasing the doses gradually as you proceed. There is no danger of producing prostration; on the other hand, it will, after the immediate depression of the nausea ceases, leave the patient stronger. In a few minutes after the vomiting is over the pains will cease; while in true labor it will increase them. Why this is the case, I don't know; but I know it to be a fact, from positive experience in a large number of cases. There are a great many things in medicine which we cannot explain, and those who attempt the explanation frequently leave the subject as much in the dark as before. We only know what will result from having witnessed previous cases under similar circumstances. Of the emetic tincture, half a drachm is a dose, this given with aromatic infusions is generally effective. I give an infusion of black cohosh and unicorn, in repeated doses, for the first day, and afterwards three or four times a day, for several weeks. The patient should be kept quiet, and the bowels in a regular condition. These pains are frequently caused by severe costiveness, in which case you must administer an emetic for immediate relief, and follow this up with mild cathartics; using such as the case indicates; it may be a colagogue or a hydragogue cathartic. I have generally used small portions of podophyllin and continue it till the proper effect is produced. Or you may use the compound syrup of senna with small portions of cream of tartar. In some cases the time of gestation runs over nine months, even after the neck of the uterus is obliterated. This,

in fact, has been the case with some of my patients where I have used the aletris favanoza, (helonias dioica,) but this state of things was not accompanied by any appearance of ill health on the part of the mother, and the child was healthy; and although they did overrun the usual time they went through with the labor safely. I look upon this medicine as being the best article in the whole materia medica, for the prevention of abortion in those cases where the patient has aborted several times, and is subject to the accident. For the last three years it has operated as a specific in my hands, and I have the testimony of a number of physicians who have used it for ten or twelve years to the same effect.

The walls of the uterus, at the full time, are from one-fourth to a half an inch thick. They are very vascular, forming a complete network of vessels.

The muscular power of the uterus is very great. I have on several occasions had my hand made very lame by the contractions of the uterus upon it. I once had my hand retained in the uterus for half an hour by its powerful contractions, and in fact, this is not an unfrequent occurrence. You should be very careful not to become so crippled in this way, as to be unable to complete the delivery.

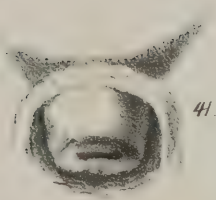
About the fourth or fifth month, usually about the middle of the fifth month, the uterus rises above the cavity of the pelvis.

At the full period of gestation, the uterus is about twelve inches long, nine inches laterally, and eight inches antero-posteriorly, yet it may be over or under this size, according as the amount of the liquor amnii is more or less.

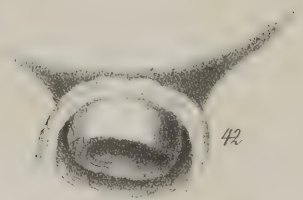
Quickening is that condition which takes place at the time the fetus begins to manifest signs of life; that is, when it is grown sufficiently large and strong to impart motions to the abdomen of the mother. But this is not the first animation of the embryo, it receives life at the time of impregnation, but of course, at that early period, it is not capable of imparting any sensible motion to the mother. Some females experience



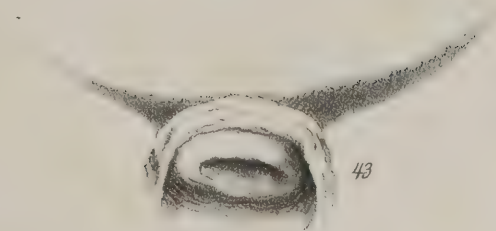
Position of the finger, while touching



State of the neck at 3 months



State of the neck at 6 months

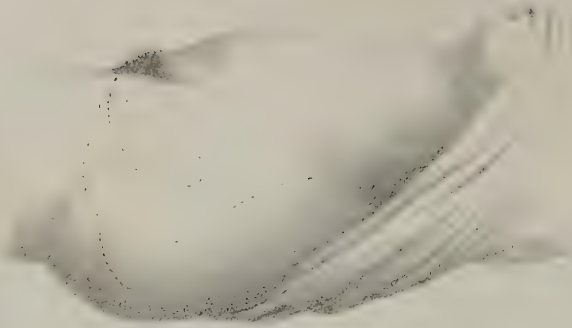


State of the neck at 9 months.

Natural State.

a

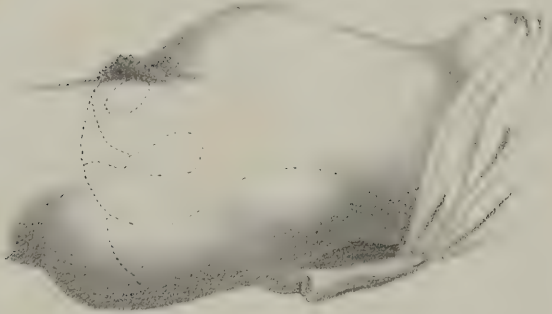
44



3 months

b

45



6 months

c

46



9 months

d

47



very unpleasant symptoms at this period—frequently fainting on account of the disturbance in the circulation caused by the pressure upon the abdominal vessels from the resistance of the abdomen to the enlargement of the uterus. There is never any vacant space in the abdomen, and all space to accommodate the uterus must be produced by this distension of the muscles. The muscles become stretched, and thus resist the ascending and descending motion of the blood, and it is thus prevented from going to the head, and she faints. In such cases, lay the patient down on her face, or side, inclined as much as possible to the face, to take off the pressure, give her cool drinks, and bathe in cold water, give her some tincture of nervine, or lady's slipper, to allay the excitement of her nervous system.

From the first to the third month, the uterus seems to be depressed and low down in the pelvis; after this, it gradually rises up, though the rising between the fourth and fifth month is sudden. The neck of the uterus, up to this time, remains compressed like a cup, but it now becomes round, and the depression disappears, so that there is a projection instead of a depression.

Plate XV shows the appearance of the mouth of the womb at different periods, and also the position of the hand for *touching*. As the uterus rises up, the neck looks back; it rises up anterior to the intestines, the whole of them being behind, and none in front. The bladder is still in front and continues there. The fundus of the uterus rises up in the abdomen and the neck presents downwards and backwards. The fundus inclines to the right side, or the whole of the uterus inclines often a little towards the right side. In women the abdominal muscles are very strong. In Plates XVI and XVII the history of the abdominal enlargement, as correspondent with the development of the fetus is to be seen; as, also, the correspondent condition of the *mammæ*.

The pressure of the uterus against the spine often obstructs the passage of the blood in the abdominal aorta to some extent, and thus the blood is crowded to the brain and the func-

tions of the latter are thus sometimes depressed; and while the circulation in the lower extremities is also obstructed, there is occasionally some tendency to dropsical effusion. The pressure upon the vena cava causes, in some cases, much obstruction in the return of the blood, which is witnessed by the varicose veins of the legs, that are so common with pregnant females. The symptoms attending the condition where there is too much blood in the upper portion of the body, are flushness of the countenance, sighing, headache, sometimes cough, and a feverish state. The cough is not apt to be abated till after the birth of the child, and then it subsides of itself, if there be no disease of the lungs; if the cough was produced by this obstruction it will subside. For this condition you should prescribe light diet, and that which is rather of a cooling character. Cold bathing will be found very beneficial. Give, occasionally, hydragogue cathartics. You should be very sure to keep the bowels in a healthy condition; keep them open, and be careful that no morbid accumulations take place. Direct her to exercise within the bounds of proper caution. She should be comfortable, but not confined to her room; do not allow her to lie on her back, but rather inclined towards the face. At the time of labor she should not lie on her back, for by allowing her to do so, you injure her by obstructing the circulation. When lying on the back, women are more liable to convulsions, especially if they are of a full habit. If you have such a patient, look out; for if you are not very cautious—if you have not taken great care of her bowels, and if you allow her to lie on her back, you may bring on severe and fatal convulsions, or even apoplexy.

LECTURE VIII.

I was speaking in my last lecture of the plethora which occurs sometimes in pregnancy ; and I would remark that these patients will probably call on you to bleed them ; but you must remember that bleeding is always followed by more fullness, and those who die with convulsions, at labor, are those who have been in the habit of being bled. Though bleeding may give them temporary relief, yet it renders their condition worse in the end. I have never had occasion to bleed in a single case ; but give them more permanent relief by administering active hydragogue cathartics. Tell the patient that it is dangerous to bleed, while the other remedies will produce the same effects. Tell them to soak their feet in hot water, and bathe the whole body in something stimulating ; at the same time, give hydragogue cathartics—*podophyllum*, cream of tartar and senna. If there is a tendency to dropsy, give *podophyllum* and other hydrogogues, as, iris salts and senna, thus to carry off the serous fluid ; give, at the same time, diuretics. These increase the urinary secretion very much, carrying off the serous fluid from the bowels, and, by acting on the urine, you can relieve the patient of a superabundance of the circulating fluids, carrying off ten or twelve pounds, without injuring the patient, and afford her more relief than you could by bleeding, and at the same time you produce a revulsive effect, and thus give permanent relief. A cold sitz bath is excellent in such cases ; you need not be afraid to put the patient in cold water ; make her sit right down. It strengthens the uterine region, and at the same time relieves the oppression of the head. At the same time put the feet in warm water ; this produces a most happy effect.

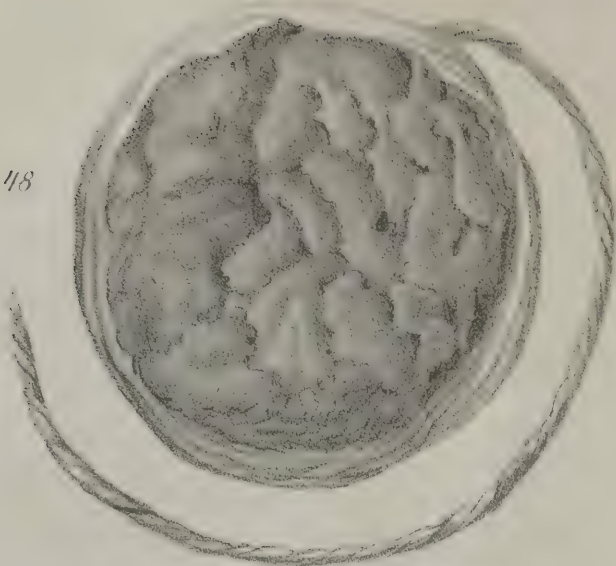
Now some of our physicians have been in favor of indulging the patient with a little bleeding, where the individual very much desired it. They say, take a few ounces and follow this by a cathartic, which means would answer, the small amount of blood taken would do no harm, (if you don't take too much,) while it would satisfy the patient. Such a man is unfit to practice reform medicine, if he is thus led by the whims of his patient. I will not practice bleeding when I know it to be wrong—such a course is dishonest. I tell them that I can relieve them just as much by other and less injurious remedies, and I have always succeeded in inducing the patient to try my plan. You must have a little moral courage in these cases, not to yield to a positive evil because they want you to do so. You might as well let a drunkard have a little liquor—for, if you let a patient be bled a little, they will want to be bled again, and again, and again, till you get the patient in a dropsical condition; and, perhaps, most of these cases of dropsy in pregnancy have been made such by bleeding; and I would say to you, avoid the very appearance of evil, especially where you would be acting dishonestly, and doing the patient much harm. I know it is said if you do not please the patient, she will fall into hands that will do her more harm. If you have the proper confidence in yourself, you can inspire your patient with confidence; approach the patient as though you knew she would believe you, and she will have confidence in you; but if you appear to be afraid, she will be afraid to risk you.

The milk-leg (phlegmasia dolens) is often the result of this abominable practice of bleeding during pregnancy.

P L A C E N T A .

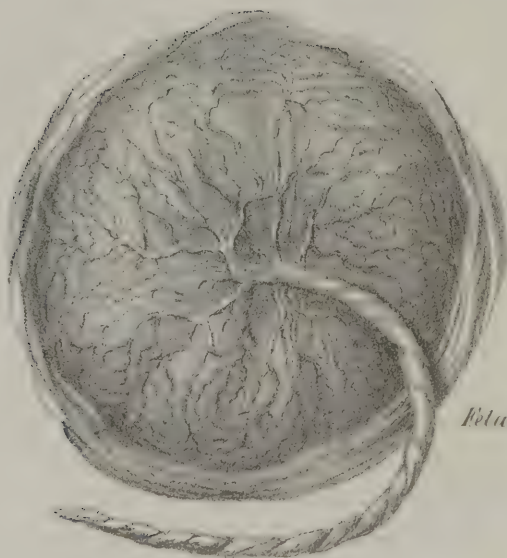
The placenta is said to be a projection of the chorion. It is an organized substance made up of an organized mass somewhat analogous to the substance of the spleen, but is a complete *arrangement* of arteries and veins, connected by small *vessels* formed in globules. The use of the placenta is for the connection of the child to the mother. It serves to oxygenate the blood so far as

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Uterine Face.

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Fetal Face

Placenta

any oxygenation of this is accomplished; it acts as lungs for the child. It is also a source of support for the child; for if the placenta becomes detached, by any means, the child dies, so we find that it lives through the placenta. There is a dispute between authors as to the kind and mode of action of the placenta, whether the passage of the blood from the mother is vascular or not; it is contended by one party that it is simply protine, and that oxygen is received in the placenta—that there are canals running through the walls of the uterus, from which the placenta imbibes its support. The proof of this position is that the placenta is frequently peeled off of the surface of the uterus without rupturing any vessels. Numerous instances of this kind have been cited. On the other hand, it is contended that there are vascular channels communicating between the child and the mother—that no circulation would furnish the child with subsistence, and the proper nutrition for growth, without the intervention of blood vessels or capillary vessels; and, to prove that this is the fact, cases are cited where the placenta was torn off, and was not only ruptured itself, but that the surface of the uterus also was ruptured, producing hemorrhage. Both positions are sustained by proof. But, it is my opinion, from the weight of testimony, that the communication is not vascular; that the nutrition from the mother is communicated by the plastic *properties of the blood*—that the blood passes by the process of permeation, as the serum passes through the interstices of the tissues in case of dropsy; though this latter is a morbid process, and the other is *healthy*. I may be wrong, but I have good authority, while there is testimony against me.

Plate XVIII. shows an inner and an outer surface of the placenta, with its chord attached.

The placenta usually attaches itself to the upper portion of the uterus, to the fundus, but it may be attached to any point.

The membranes surrounding the uterus are three, the *decidua*, *chorion*, and *amnion*. The deciduous membrane, called also the *caducas membrane*, is the outermost of the three. It is thrown over the whole internal surface of the uterus, immediately after

impregnation, and is an inorganic substance of a plastic nature and considerable consistency, which not only covers the mouth of the uterus, but also the fallopian tubes, and is imperforate at every point. This deciduous membrane is pushed back as the ovia pass into the uterus, and reflects over the ovia. As this passes along, it pushes off the deciduous membrane from the uterus, and, finally this membrane is thrown over the ovia, on all sides, except where it is attached to the walls of the uterus. As this grows, these parts come in contact, and it is stated by some authors, that this deciduous membrane really remains until the birth of the child, and is attached to the walls of the uterus the whole time. But others say it is absorbed, as its name indicates, *caducas*—passing off. Within this, and unconnected with it entirely, are the proper membranes of the fetus. The outside one is called the *chorion*, and the other the *amnion*.

They never have any vessels. The external surface of the chorion is covered with a fringe like velvet—little projections or processes, like the villi on velvet—this is over its whole external surface, though its internal surface is smooth and fair, inclosing a fluid.

The chorion seems to unite the ovum with the uterus, contributes to form the placenta, sustains the amnios, and transmits to this membrane the minute and colorless vessels which pour into its cavity the liquid which supports the fetus.

The amnion encloses a fluid within it, called the liquor amnii. The fetus floats in this liquid, and thus the fetus is prevented from coming in contact with the different parts, by floating between them.

UMBILICAL CHORD.

The umbilical chord is a vascular fasciculus, attached to the placenta, of which it may be called a vascular extension of its organization, and continues in a chord-like form to the umbilicus of the fetus. It is short at the early part of pregnancy, and is formed at this time by the omphalo-mesenteric vessels, by the umbilical arteries and veins, and by these latter alone at the end



*General view of the child
at the end of pregnancy*

of pregnancy. Its length is, generally, from eighteen to twenty-four inches; but not unfrequently is much longer or shorter. When very short, it will be beset with knots in one or more parts of its extent.

All umbilical chords are not similar. Some are large, some small; some smooth, and others rough or knotty. The large are not generally firmest; but the small, as is found in the force applied in extracting the placenta in pulling upon this chord. The thin chord being ever found the strongest.

Plate XIX. shows the connection of the child with the appendages, at the period of full gestation.

LECTURE IX.

I promised you in my last lecture, to recapitulate matters connected with the appendages of the fetus.

First, the membranes, called the caducas, or deciduous membrane; second, the chorion; and, third, the amnion. These are the three membranes, beginning outside, next the uterus. The decidua, or, as it is frequently called, the caducas membrane, is formed at the time of pregnancy by the exudation of coagulate matter which creates and forms a bladder, or closed sack, which is filled with a fluid, and in contact with the whole internal surface of the uterus—completely covering its whole surface, and sometimes extending some distance into the fallopian tubes. The ovum, as it passes into the uterus, depresses this membrane—the decidua—in order to enable it to enter the uterus, passing along between the decidua and the walls of the uterus, till it becomes attached to some point on the uterine surface. After this, the caduca or decidua, has two portions or reflections, the larger of which lines the whole cavity of the uterus, but does not cover that part of the ovum which is in contact with it, while the larger part overlaps it.

As the uterus enlarges, these membranes increase in size with its growth; and as the fetus grows, the membranes covering it increase. The uterine decidua preserves its thickness, and even increases some, but that portion around the fetus becomes extremely thin.

Now, the situation of the fetus and caduca, relatively, may be compared to the lung and the pleura. That is, the pleura is a complete sack attached to the lung and overlapping it, and filling the cavity in the thorax, being unattached to, but

lining the cavity of the thorax; so the reflections of the caducas sack which lies in the cavity of the uterus is detached from that part which covers the ovum.

The chorion, or second investment of the fetus, is covered with a down or villi, made up of little projections, and these little projections are found to surround vessels. They are simply ariola sponges until about the fourth or fifth week. The inner surface of the chorion is in contact with the reticulated sack within. Up to the second month, this is separated from the *liquor amnii*, resembling melted glass, and about the consistency of the white of eggs. The amnion is a smooth transparent membrane, separated from the other membrane, by the fluid, and from the fetus by the *liquor amnii*. It is slightly attached to the chorion by means of delicate filaments on its external surface. During the first two or three weeks, it has no connection with the fetus, but afterwards it becomes attached to the fetal end of the chord. As it grows, it fills up the space between it and the chorion, and at the fourth month these two coats become inseparably connected—glued or welded together; so that after that, there is no such thing as distinguishing them; but previous to that, they can be separated. The amnion, as well as the chorion, is entirely devoid of vessels. It is disputed whether the amnion has one or two coats—one or two *amnii*—perhaps the majority are in favor of the hypothesis that there is but one; that it folds on to the chord at the latter period when the chord becomes fully developed, it folds over the chord and forms one of its covers.

The *liquor amnii*, in the amnion, contains the fetus. This water is probably secreted by the amnion, but where it comes from is a matter of dispute; it is perhaps proper to conclude that it comes from the amnion. The quantity is much larger in proportion in the early part of gestation. The proportion of water, compared with other parts, diminishes somewhat, but there is really an increase at the full time, from what it was in the early part. There may be from four to ten pounds, in some smaller and in others more. There is a great variation

in quantity. This water has sometimes a nauseating, insipid taste and smell. It is ordinarily transparent, though it may be otherwise; but when not transparent, it is the result of disease. Its chemical composition is a matter of dispute. Many experiments have been made, and many more must be made, to settle it. The uses are to favor the motion of the fetus, to separate the limbs of the child and prevent their adhering together to protect the fetus from injuries, to prevent it from cramping, to maintain the dilatation of the uterus, as it grows, so that the fetus will not be pressed against the walls in labor, and to offer a smooth round surface for it to pass through at delivery, and though I do not know that nature so designed it, but it is of great service in introducing the hand, and turning the fetus around. About the umbilical vesicle of the embryo, there is much dispute. It is at first a small spheriform sack, and may be seen about the second week after impregnation, as large as an ordinarily-sized pea. It enlarges considerably up to the end of the fourth week, and then gradually diminishes till, at the end of the second month, it entirely disappears; yet it, however, has been found as late as the sixth month. It is situated between the chorion and amnion, closed in a sack of a *peculiar* character. Up to the tenth day it remains closed in this sack; it then unites itself to one of the membranes, the amnion or chorion. It is connected by a pedicle, at the end of four weeks, to the fetus, from two to six lines long and about one-fourth line in thickness. This pedicle is rather funnel-shaped, and is continuous with the intestinal tube, which is outside of the amnion. This is the intestinal tube of the germ. It divides into two parts, before the parietes of the abdomen are formed, and seems to have passed into the amnion entirely, between the spine of the germ; it lies between every portion of the tube and the umbilical vesicle. Occupying the other part remains the decidua, amnion and the vesicle. But the first month this canal elongates considerably, and can be traced through the belly after the end of the first month. It is then from half an inch to an inch long. This pedicle is

simply a hollow tube, up to the twentieth day. It is obliterated about the fifth week. This time is, however, variable. It frequently continues considerably longer; this depends upon the completeness of the chord. There is a strong analogy between this yolk, or vitalizing matter contained in this sack and the yolk of an egg, and is probably designed to nourish the fetus in its early development, from the time fecundation takes place till it attaches itself to the surface of the uterus. Until it has thus attached itself, it has nothing else to nourish it. It must have some source of nourishment in itself, and it is but rational to conclude that it is nourished in the same way that the embryo chicken is. It is similar in nearly every respect to the egg, and contains within itself a source of nourishment, for until it does attach itself to the uterus, it is just as free from the mother, as the egg is from the hen.

The umbilical chord is a matter of considerable interest. This is the medium of attachment between the mother and fetus, and exists from impregnation to the time of delivery. At birth it is generally from fifteen to twenty inches long, but the length is variable; it is about the size of a man's little finger; this is a very indefinite measurement, but perhaps a correct one, as it varies about as much as the little finger in different men. But it is extremely small at first, with no interior coat or covering whatever; at three months the chord is complete. It has two arteries and one vein, and is surrounded by a spongy tissue and covered with a sheath, derived from the amnion. The chord is always twisted: this is a matter of considerable curiosity, but is perhaps caused by the rotations of the child in the womb. But what is really singular is the fact, that it is always turned from left to right. I do not remember that I ever saw it twisted in the contrary direction, but in the books it is stated that this peculiarity extends through about nine cases in ten. Sometimes the arteries surround the vein, and sometimes the vein is twisted around the arteries. These have no valves. I have proved this to be the fact by experiment.

The placenta is that part of the ovum which is in contact

with the internal surface of the uterus. In the human species it is a soft, spongy, vascular substance, and circular in form. It is generally from six to eight inches in diameter, but variable. It is from one to one and a half inches thick at the margin, but usually thicker in the center; sometimes, however, you will find in it irregular thick and thin spots. The fetal surface is covered by the chorion, which adheres closely to the surface. The uterine surface is regular and smooth, and rather spongy at these surfaces, while in contact with the uterus it seems to be regular and smooth, covered with a fine velvet, but, by examination, it is found to be full of crevices, supposed to be caused by the ruptures of the delicate vesicles. The placenta is made up almost entirely of blood vessels which are the expansions of the blood vessels of the chord, the vein, and two arteries. The development of the placenta is also a matter of dispute among authors, yet it is pretty well settled that it is derived from the chorion. As an ovum passes into the uterus and comes in contact with its surface, these villi cause it to adhere, and from this point of attachment the placenta becomes developed, and the other appendages become involved in the decidua and disappear, while this grows and develops the placenta. This, we stated, had no vessels in the ovum originally, but they seem to be attached to the uterus by a plastic chord.

It was stated that the umbilical vesicle connected with the abdomen of the fetus in the intestinal tube of the germ, became involved in the chord, and that this extended through the chord, finally supplying the placenta with its vessels. The mode of communication between the placenta and the uterus is, probably, simply plastic communication, and it is probable, too, that whatever it receives from the uterus must be by this process.

The subject of double ovia is an interesting subject, and we will briefly touch on it. When two ovia are impregnated coming from opposite sides and enter the uterus, they generally form two distinct apparatus, placenta, etc.; but if they come from the same side, they may have but one placenta; or they may both

be enveloped in one chorion; or have separate amnii; however, these are all matters of uncertainty and dispute.

The development of the fetus is another interesting matter. The question, at what time it enters the uterus, is a matter of controversy. It is supposed by some that it enters in a few hours after impregnation, while others say it is several days—some say weeks. During the first week of the development of the germ, it resembles in almost every respect, the young serpent or snake, which will be found in the snake's egg; that is, the head and neck, which make up one-half the length of the whole embryo, (*see Fig. 28 of Plate XIII.*) The spine is curved. The head, at the fifth week, resembles a club. (*See Fig. 28 of Plate 13.*) It is developed at the twentieth day. The mouth is first developed, and resembles the mouth of a snake; the nose comes next; the eyes are developed at the time that the mouth appears; or, in some instances, sooner. The ears are developed at the fiftieth day. The bones are not fully developed till the full time, and though the head has its proper form, the sutures are not closed up till sometime after birth.

The proper attitude of the fetus is with the head downwards. The upper part of the body being first developed will fall downwards by the force of gravity, and this is probably the reason of the position.

Superfetation is supposed to be the development of another fetus after one has commenced growing. This is a matter of dispute, but may be true. That twins may be the product of two separate copulations, is proved by the fact that individuals have been known to bring forth a white and a black child at the same birth. Another fact is brought forward to prove this: that an abortion that seemed to have existed only a month took place, and shortly afterwards the individual was delivered of a full-grown healthy child. But it is frequently the case with twins, that one is full-grown while the other is far from being fully developed, and also where one is still-born and the other living. As to the nourishment of the fetus, I have said enough already; it is undoubtedly through the placenta, and not through the liquor amnii.

LECTURE X.

THE FETAL CIRCULATION.

It is difficult to understand clearly the fetal circulation unless we are thoroughly acquainted with extra-uterine circulation. So, to give you a correct idea of the circulation of the blood in the fetus we will run over that of the extra-uterine, and point out the difference between the two. In the extra-uterine state the blood leaves the heart from the left ventricle and passes down the descending aorta to the lower parts of the body, and up the ascending aorta to the upper portions of the body; it then returns to the heart, ascending and descending through the vena cava, to the auricle; leaves that for the right ventricle, from which it passes through the pulmonary artery to the lungs; after ramifying in the lungs it returns through the pulmonary veins to the left auricle, then passes from the left ventricle to the aorta, where it began. Now, we will trace the fetal circulation.

We will commence at the placenta and trace the umbilical vein which, in this case, carries the hematoised or arterial blood, as the lungs of the fetus are inactive until after birth, and hence all access to oxygen takes place in the placenta alone.

This vein rises in the placenta from numerous radicles, and passes along the umbilical chord, entwined or parallel with the two umbilical arteries, until it reaches the umbilicus of the fetus. It then passes into the abdomen in the direction of the liver, and continues immediately under this organ until it passes into its great sinus. Here it sends off a large and a small twig, forming a kind of a sinus destined for the liver.

The umbilical vein after this becomes very small, and is now called the *venous canal*, passing on towards the right auricle of the heart. But before it enters the heart, it becomes united with the ascending vena cava.

It must be observed that the blood which enters the heart thus by the union of the ascending vena cava and the venous canal, does not mingle with that carried in by the descending cava, but is kept separate from it by the Eustachian valve, being sent forth in a different direction, it strikes the septum of the auricles, passes through the foramen ovale (Botal,) and raises its valve, which being on the side of the left auricle, does not permit the blood to re-pass into the right auricle. Having arrived thus in the left auricle, it is transmitted into the left ventricle, and thence by the ascending aorta is distributed in the head and thoracic extremities.

In returning from above, the blood is carried by the descending vena cava into the right auricle, which transmits it into the right ventricle, and from thence it passes into the trunk of the pulmonary artery. But a small portion only of the blood carried by this artery is found to pass into the lungs—these organs being in a collapsed state, now need only enough blood to nourish them—most of it, therefore, passes into the descending aorta by means of the arterial canal, (*see Plate.*)

After passing through the descending aorta its entire length and entering the primitive iliacs, we find branches arising from these latter on either side, which now constitute the umbilical arteries, and reconvey the blood to the placenta. Thus the blood which comes from the placenta and is oxygenized, passes first, to the head from the heart, and we may hence account, perhaps, for the more rapid development of the upper extremities in the fetal life.

Thus we have the peculiarities of the fetal circulation, the *umbilical vein*, the *ductus venosus*, venous canal, the *ductus arteriosus*, or arterial canal, and the *umbilical arteries* going off from the iliacs.

ABNORMAL CONCEPTIONS.

I will say a few words on the subject of faulty developments, and abnormal conceptions. It was stated to you that the ovum became impregnated in the ovary, and that it was grasped by the fallopian tubes, and, sooner or later, it made its way to the uterus. This is its natural course, but it may attach itself any where along the tube and grow; this would be called tubular conception. I defined conception, in a previous lecture, to be the reception of the ovum into the uterus; impregnation, to be vivification of the germ in the ovary; gestation, the nourishing of the germ till it arrived at a proper state of development to be expelled. Now we have called attention to tubular conception—it may, also, be dropped by the fallopian tube, into the cavity of the abdomen—that would be called abdominal conception—and, in this way, the fetus might grow to an enormous size. But it may find its way into the uterus, and not be properly developed, in which case it is called a mole; it may be a true impregnation and go on well, attach itself to the uterus and still not grow. I don't know how it is, but when the child ought to be developed, it is not.

The duration of pregnancy is usually two hundred and eighty days. The manner of reckoning this is from the disappearance of the last menses to the delivery. There are various modes of reckoning this time, but is generally agreed to be two hundred and eighty days, or nine months, or forty weeks, etc. Moles are considered faulty developments; however, the correct doctrine is, they have no development at all: that they are neither from the ovum, nor the result of conception. When in the ovum the development is faulty, and continues to grow, and passes the period of quickening—passes the sixth month without quickening—you may consider that it is not a child. It may be something else, you can not tell what. It may be the fetus in the abdomen, or the fallopian tube—you can not tell what, till you cut open the patient; however, it is not safe to conclude that there is not a child, because you don't see it; for cases have gone on to the

time of delivery, without the slightest indications of life, and yet the child be born in a perfect state; and the fact that one such case has occurred is security that it might occur again, and enough to deter you from trying to get rid of it, without waiting for the natural result. In fact, some have gone ten or twelve months and then been delivered of a healthy child. But, if it goes over nine months, it is safe to try and do something for it.

It is usual to take up the treatment of such cases here, but I will defer it till I come to speak of diseases of females.

THE SIGNS OF PREGNANCY.

The three prominent signs of pregnancy are—first, the cessation of the menses; second, enlargement of the abdomen; third, moving of the fetus.

Now, if you have the first, in a female who has been exposed to the cause of pregnancy, it is right to suspect this is the case; if, in connection with this, you have enlargement of the abdomen, there is further testimony; but, if this is all, you still have no positive evidence, and can not have till the time of quickening; then wait till that time, and if you have cessation of the menses, enlargement of the abdomen, and motion imparted to the abdomen of the mother, you may be positively certain that she is pregnant. Other causes will produce enlargement of the abdomen and the cessation of the menses, but nothing else will produce the motions.

But there are other signs: sometimes within a few days after pregnancy, but not, generally, till the third month, the pregnant woman will complain of vertigo and dizziness, and there will be a dark areola around the nipple of the breast; this is a very marked symptom in women who have not had children. In them it is more clearly marked, but not so plain in those who have borne children. But you will wish to know whether a woman is pregnant or not, often, when you are not permitted to examine the last mentioned sign, so you must notice other signs. A disposition to spit a great deal is a general symptom, though not always

present. The spittle, also, is peculiarly white; and, hence, we frequently hear the female friends of a newly-married lady making use of the remark, in an insinuating manner: "There, she is beginning to spit cotton."

Now, to distinguish between a suppression of the menses and a suspension, you can judge considerable by the countenance. If suppressed by cold, or otherwise, so as to stop them entirely, the countenance will be florid, and a rush of blood to the head; but if suspended by pregnancy, she will be more than usually pallid. She will often complain of the heartburn, with an irritable state of the mind. I have known some women who ordinarily are very pleasant and affable with all their associates, but when pregnant are perfect demons—their dispositions change from the lamb to the tiger, and they abuse their best friends without the least cause. While, on the other hand, I know others, though they are not so common, who are rather harsh and turbulent ordinarily, when they become pregnant, and during the whole time of gestation, manifest the most amiable dispositions. I know of one, in particular, whom I have attended three times; at first, before I attended her, knowing her disposition so well before she was pregnant, I was really afraid to undertake the case; but, I found her character totally changed. Toothache and earache are very common signs of pregnancy. Be careful how you extract teeth under such circumstances, if the tooth appears to be sound, or if it can be filled or cleaned. If she complains of a tooth that appears to be sound, and has a decayed tooth, though it be on an entirely opposite side, by extracting that tooth, the aching will cease, while if you extract the tooth that aches it will not. I had a sound tooth taken out myself once, for which I would not have taken fifty dollars, (no man will be willing to take fifty dollars for a sound tooth,) while the aching was caused by another, and a decayed one.

Never take a sound tooth from a pregnant woman. If you commit such a blunder, you are not fit to be physicians. It may be necessary to take out a tooth, but it must be decayed.

LONGING.

Women all know what longing means. Ask a young woman whom you suspect is pregnant, if she has longings, and you will not receive any answer; but you can ask her about her appetite, in an indirect way, without creating any suspicion, and, by that means, arrive at your object. But you may ask a married woman, with safety, if she has longings.

Women often desire food that no human being, or any other animal, can eat under ordinary circumstances; and, of course, if it is at all eatable, you must let her have it; but if not, you must prevent her eating it. Now, I have just visited a lady who is much troubled with longings, and I directed her to obtain the food she desired, and eat it, that it would set well on her stomach, though she is not accustomed to eating it.

Dispeptic females will desire fat pork, frequently; though under ordinary circumstances, it would not at all agree with them; but at this time will set well on their stomachs, and they will relish it, and it will positively do them good. If I have a patient that would like to have some brandy, I tell them to get it, and it will not make them drunk, they will not drink enough; very little will satisfy them. Some will wish to eat chalk, soot, slate pencils, etc. I know a young lady, who, though not pregnant, but afflicted with a disease of the uterus, ate two pounds of slate pencils in two months. This she confessed afterwards; but this, evidently increased her ill health..

We can sometimes ascertain whether or not the patient is pregnant, by the sense of touch—by feeling the uterus; (for position of hand in this examination, *see Fig. 48*;) but it is not absolutely certain until after quickening, for no other sign is positively certain, till the fetus has grown large enough to impart motion to the abdomen of the mother. However, we may sometimes learn whether a woman is pregnant or not, by applying the ear to the abdomen, and discovering the circulation of the placenta, and if we can hear the circulation of the fetal artery, we may be satisfied that there is a fetus there; but we must not mistake the cir-

culatation in the mother for this; to avoid this, notice the beating of the mother's heart, and if the pulsation is hers, they will beat together; while that of the fetus is much more rapid, beating generally one hundred and thirty per minute. This is not the case with the mother, unless in a high state of excitement.

B A L L O T M E N T .

The process of ballotment is sometimes resorted to. A method which I frequently adopt, is this: I put one finger into the vagina, with the other hand placed on the abdomen, and suddenly push up, with the finger from below, and if there is anything in the liquor amnii, it will be thrown up so as to impart a sensation, then by holding steadily, you will feel it drop down again. You may, by this means, ascertain if there is something in the uterus; but there are frequently cases where there is a fetus in the uterus, and the sensation is not imparted, though this is generally a good test.

LECTURE XI.

QUICKENING.

This is an epoch in pregnancy that takes place about the sixteenth or twentieth week; that is, it is generally between these two.

This is the period when the fetus has grown to a sufficient size to impart the sensation of motion to the abdomen of the mother; but, as remarked before, it lives previous to this time—that it commences to live at the time of fecundation, but up to this time has not power enough to impart sensation of motion to the abdomen; and, hence, we reckon quickening at this time; however, in a legal point of view, the child is not considered as a living being previous to this time, and an attempt to produce abortion previously is not punished; but, if after quickening, it is considered murder. It is, in my opinion, just as much murder previous to this time as after; in the latter case, it is only taking the life of a human being further advanced in development. As far as the use of the word abortion is concerned, it refers only to the coming away of the fetus, after quickening; previously to this time, it is called miscarriage.

ABORTION.

Various causes may produce abortion. I will mention some of them—sudden mental excitements; (these are external causes) either pleasing or sad intelligence may produce such an effect on the system as to bring on abortion. Powerful emetics, long continued, such as antimony, zinc, etc., which produce de-

pressing and sedative effects, will produce abortion. Those that we use will not produce any evil effect. I have almost invariably used an emetic to prevent abortion, where very strong symptoms existed. I use our common emetic, of which lobelia is the principal. There is no danger whatever in it, of this I am satisfied by my experience in a great many cases, that it has no tendency to produce abortion. Violent blows on the abdomen will produce abortion; also, shocks from falling or jumping from a horse, or any elevated position, will have a tendency to produce abortion. Frequent stooping, so as to oppress the abdomen, will produce it. Reaching over the head, whitewashing, for instance, I have known in many cases to produce abortion; this has the effect of producing contractions of the abdomen. Costiveness, by producing accumulations in the rectum and lower portion of the colon pressing on the uterus, will cause hemorrhage, which will result in the death of the fetus. Diarrhea, followed by dysentery, causing contractions of the muscles of the abdomen, may displace the fetus, or detach the placenta.

Whenever there is a *show* during pregnancy, you may suspect that the case is a critical one. What is meant by a show is a slight appearance of blood—very little, usually mixed with other fluid; when a large quantity of blood appears it is called flooding. These are terms well known among the women, and when inquiring of them about these matters, you must employ the terms with which they are acquainted. Ask a woman if she has hemorrhage, and not half of them will know what you mean; but ask her if she has had a show, and she will understand you. Ask a female a question she does not understand, and nine cases out of ten she will answer, “No;” and feel insulted by it.

A diseased fetus is very apt to abort. Now, when a fetus is affected with small pox, or the mother has been vaccinated and it is effected thereby, it is apt to come away; or, it may not come away till the full time, and then live a few months.

A total displacement of the uterus from the proper position

will generally produce abortion. Now, in all these cases, it is necessary for you to pay particular attention to the patient, especially where there is hemorrhage, and the more so, if this hemorrhage has taken place after quickening. There is much more danger of hemorrhage after quickening than at labor; perhaps there are nine cases of fatal hemorrhage in abortion, to one at mature labor. If the pains are very urgent, and you cannot stop them by mild means, you must assist them as fast as possible in facilitating the expulsion of the fetus; in fact, after the fifth month you will have no means of stopping the hemorrhage, till after the fetus is expelled; but, any time before the fifth month, it is possible to prevent it. When you have such symptoms, lay the patient in a horizontal position, and apply cold cloths over the pubes, and over the genital organs; also, use the tampon. The best thing I have used for this is raw cotton in cold water, with an astringent. The infusion must not be too strong. Press the cotton into balls about half as large as a hen's egg, and introduce them into the vagina and mouth of the uterus; put them in, one after another, till the vagina is filled up. Use an infusion of matico, after the cold water, and introduce that into the vagina till it is full. In many cases you may arrest the hemorrhage in this way, but when it is very bad, and there seems to be but little prospect of arresting it, you had better let the pains come on, and expel the whole of it. If the os uteri is dilated, so that you can introduce your finger, you may pull away the fetus; if it is not removed, it will remain and putrify, and trouble you a good while. If there is not sufficient dilatation to enable you to introduce your finger, you must produce dilatation. I would recommend—first, that you inject with the catheter an astringent—an infusion of matico. I have used this with good effect. It produced smarting at first, but it reduced the hemorrhage. I treated a case of this kind about three months ago, which is now going on well. In other cases the hemorrhage was also arrested with little trouble. Ergot is recommended in your books. Never use it till you are

obliged to. In cases where you use it with a view to produce contractions, there is danger of hemorrhage following. In many cases, black pepper will produce powerful contractions; but sometimes, it has no effect at all. If the case is not urgent, (and nothing but hemorrhage or convulsions can make it so,) introduce the tampon and wait; but you must be careful about internal hemorrhage.

Sometimes you cannot know whether there is danger of hemorrhage—for sometimes you will have a case where she has done something to get rid of the fetus, and will deny that she is pregnant—so, you must determine by your examinations whether the uterus is sufficiently large to contain a fetus. If the uterus is dilated, and there is an increased flow of blood, (it will hold enough to bleed her to death,) you must be careful, under such circumstances, not to go off and leave her. I should hate to bear the responsibilities of such a case. I should hate to think that I had caused her death.

In all cases where you apply the tampon, you should place the hand over the abdomen, and ascertain if the uterus is increasing in size, and if so, use efficient means to produce contractions; if nothing else will answer, use ergot, and if it fails, introduce the finger, if possible.

A blunt hook is recommended by some, but I don't like it. But, understand this, that if she were not in this condition—if the uterus were not dilated, there would be no hemorrhage, and the removal of this cause will stop it. If it is so far gone that the tampon will do no good, the only safe plan is to remove the fetus. I consider the ergot safe, where there is no danger of hemorrhage; where the uterus can be made to press down on its contents; but she may have become so very much exhausted before the time comes on, or by previous hemorrhages, that she cannot stand the powerful effects of the ergot; and, if you find she begins to sink under it you must stop—then you must depend upon your astringents. I have used a solution of tannin, but I believe the matico to be much better. If you cannot suppress the hem-

orrhage, and she is weak, don't disturb her—let the fetus alone, to putrify, and thus come away. It is rarely the case, however, that putrifaction is required as a means of removing the fetus. I repeat it, never use the tampon where there is great danger of internal hemorrhage.

It is, then, only where there is a pretty good prospect of arresting the hemorrhage and abortion that this measure is applicable.

LECTURE XII.

ABORTION AND HEMORRHAGE CONTINUED.

We were speaking of dangerous hemorrhages connected with abortion. We will now say something of the internal treatment. You will commence simultaneously with the topical applications, to use anodynes—Kost's anodyne, with a little camphor, is very happy in its effects. One-half grain, with one or two grains of camphor, repeated as the circumstances demand. The nauseating emetic, *in broken doses*, or even lobelia, alone, is an important means. This has the effect of equalizing the circulation. An infusion of lobelia herb and capsicum, given in small but often repeated doses, will prove a most important remedy. I have used it considerably, myself, but it has been used more by other physicians, on whose testimony I can safely rely. They inform me, that it has never failed. I have used the star root, a most valuable remedy, in the form of an infusion of one drachm to two ounces of boiling water, steeped, and taken in doses of a teaspoonful every fifteen or twenty minutes. The oil of capsicum may be used with excellent effect, given in from three to five or ten drop doses, repeated as the circumstances may permit: say, once in from ten to twenty minutes. This should be dissolved in some kind of mucilage, as it is too pungent to be taken pure into the mouth and stomach. The buck's horn has been used by others and myself, and it has never failed. Take buck's horn and saw it up into thin slices, make it perfectly dry, and pulverize in a mortar. This may be given in substance, or it may be administered in the form of a tincture; repeat the doses frequently. You rarely have to give more than three doses

before it arrests the hemorrhage. I never knew it to fail, when used according to these directions. If there is coldness of the extremities, with strong determination of blood to the head and pelvic region, put the feet in hot water; or apply hot bricks to the extremities, and, at the same time, cover the pelvic region and the abdomen, over the uterus, with cold wet cloths; by giving, with this treatment, some nauseating remedy, you will diminish the action of the heart, and determine the circulation to the surface. But, if you are called to a case early, where the hemorrhage has not gone on far enough to satisfy you that it is fatal to the fetus, you should use the tampon—which is generally fatal to the fetus, yet you may sometimes stop the hemorrhage, and not kill the fetus—she may go on, and the child do well, but this is not usually the case; the accumulated blood will generally coagulate in the uterus, and cause the death of the fetus, and it will come away; hence, if there is any probability of saving the fetus, it is best to avoid the tampon; use the other means recommended for arresting the hemorrhage; inject into the vagina an infusion of matico, lay wet cloths over the pubes, and give nauseating doses till the patient vomits. The best means for arresting abortion is our common emetic, or the simple extract of lobelia, given in small doses; but, after this, as soon as the stomach is settled, give some of the soothing anodynes, as the anodyne tincture, or Dr. Kost's anodyne, which is the best article of this kind that is to be found.

But, if you can not save the fetus by the local means, you need not try otherwise. I would recommend a strong infusion of the *helonias dioica* and *trillium*; it is better to combine with this some anodyne; combine equal portions, in the form of small powders, given at intervals, between the doses of the infusion above ordered. This will, almost invariably, relieve the labor pains; she should continue to take this till the pains have entirely ceased. This course should be continued for several days, and, should these pains be followed by bearing down of the uterus, the doses should be continued till all traces are gone. I look upon this as being one of the best means of preventing abortion.

during any stage of gestation. It has answered the purpose in my practice, in many cases, when all other plans and means have failed, and I have also the testimony of others in favor of its excellent results.

DISPLACEMENT OF THE WOMB.

The next subject which we shall notice is the displacement of the impregnated womb. Great difficulty may occur in consequence of this. It is most apt to take place about the close of the second, or commencement of the third, month. It may be displaced laterally, but is most apt to go down into the pelvis. The fundus is thrown down upon the sacrum, and the mouth against the bladder, suppressing the urine. Now, when your patient has these symptoms, and you find causes sufficient to produce this state of things, immediately inform the patient, and institute an examination, to ascertain the fact. In this, you should lose no time—inform the husband, or some confidential friend, and, when you are ready for the examination, place the patient on her back, with her knees flexed, so as to produce relaxation of the abdominal muscles, and make an examination. By this you will be able to learn the state of the uterus. Introduce the fingers into the vagina, and replace the uterus. This may not be very easily done, but it must, or abortion will take place, and she will be subjected to great suffering. You had better be seated in a chair, while making the examination, with your face towards her face, and your right hand towards the bed; then place your finger, or, if you can, two fingers, into the vagina; raise up the fundus of the uterus, by placing one finger on that, and the other on the neck, bear downwards and backwards upon the neck of the uterus, so as to raise the fundus. If you understand the anatomy of the parts, you will understand how to go about your business. This condition suppresses the urine and causes great distress. It presses, also, upon the rectum, and occasions costiveness. If she has been in this condition long, she will have a constant disposition to urinate, but can pass only

a few drops at a time. You must first evacuate the bladder, by introducing a catheter, and drawing off the urine. This condition may have been caused by her retaining her urine voluntarily, under circumstances where it was inconvenient to get rid of it. In order to ascertain if the bladder is full, place your hand immediately over it and feel, but if she has been in the condition long, you may be certain that it is full. It may be necessary to use a very long catheter, for the urethra may be considerably extended, owing to the bladder being pressed up by the uterus. After you have drawn off the water, raise the uterus. If the bowels are costive, which will necessarily be the case if the condition has continued for several days, the rectum will be full of hard accumulations, and will offer considerable obstruction to raising the uterus. To relieve this, use injections till the rectum is evacuated. It may be easy for you to replace the uterus after having evacuated the bladder and rectum; or, you may find it difficult. The uterus may be wedged down into the pelvis so tightly as to be immovable, then turn the patient over, and make her rest on her knees, with her breast on a pillow, then introduce your fingers into the vagina, and make an effort to replace the uterus. You may also have to introduce your finger into the rectum. This may be necessary to save your patient; and, if so, you must do it. You will probably succeed by this means, but you may have to apply considerable force in the replacement. You must be cautious, however, in the way you apply the force, or you may do more mischief than good. There may be great rigidity of the parts connected with it, so that you can not manipulate properly; if so, you may reduce this rigidity by bitter herb fomentations, especially of mallows, or tansey, bruised and steeped in boiling water, and applied over the parts, or you may use comfrey and elecampane in the same way, and you may assist in producing relaxation by giving nauseating doses of lobelia, repeated till you have succeeded. You may produce vomiting, it will do no harm, though not generally necessary. If, for the first three months, the fetus remains down in the pelvis, till the fourth or fifth month, you may not be able to raise, owing to its being so firmly fixed,

if this is the case, you should immediately inform the patient and husband of the fact, and give them their choice. Abortion, sooner or later, will be the result, or else the patient must die—and the sooner abortion comes on the better.*

Then, if you see that it is inevitable, you should let it come away. However, it may be, by letting off a portion of the water, you can elevate the uterus, and save the fetus—this has been done. After having let off a portion of the water, if abortion will come, let it come; and if not, why, you have saved both the mother and the child. But, if you cannot elevate the uterus, you must use means to dilate the os uteri and bring on abortion. The best means for this is the extract of belladonna—besmear the mouth of the uterus with this, with your finger, or by a sponge attached to an instrument.

This, in the course of a few hours, will produce abortion; and you may, if necessary to hurry, give ergot.

Much is said in some of the books of means to prevent the growth of the fetus; but it is doubtful, in my mind, whether any thing is capable of producing this effect. But, I think, they are generally worse than useless. It is said by some practitioners, however, that if you starve the patient, let her eat food that she does not like, or starve, and make her drink brandy, so as to keep her under the influence of liquor, you may succeed. Starving is said to diminish very much the growth of the child. I have no confidence in this theory. If I have decided upon it, that the pelvis is too small for a child to be fully developed, and to be brought forth, by natural labor, I would recommend, by all means, to bring on abortion. For this purpose, I would use belladonna in the way described before, and also ergot, to facilitate the contractions of the uterus; or, I would introduce instruments and rupture the membranes. Now, I don't believe in allowing a

*It is not advisable to resort to this extreme measure so long as there is no sign of serious difficulty, as cases have occurred in which the womb was replaced, contrary to the expectations of the physician.

patient to go on to a fatal condition, if she has a totally impracticable pelvis. If even the child could be saved at the expense of the mother's life, I look upon the life of the child as nothing, in comparison to the mother's. Save the child if you can, but never risk the life of the mother to accomplish the object. The mother has her attachments—her husband, her friends, the whole community would be effected by her death, so far as she contributes to their happiness and welfare. The child may be a Washington, or it may be an idiot, or it may die at the very last part of labor; even should it happen to be born alive, (and the very attempt to have it born alive may kill the mother,) we have no right to kill a valuable being to save the life of one of whom we know nothing. I give my opinion candidly. Others think differently, and it is a matter between them and their God. With these opinions, if they employ me, they may be assured that I will do all I can to save the mother at any rate.

LECTURE XIII.

EXTRA-UTERINE PREGNANCY.

(See Figure 24.)

I promised to say something of extra-uterine pregnancy. First ovarian pregnancy is a subject spoken of in the books, yet, by some, it is denied. This refers to the impregnated ovum remaining and growing in the ovary. That such a thing ever takes place is very improbable. *Abdominal pregnancy*—this is also doubted, but it is probably true; the ovum may be dropped, by the fallopian tube, into the cavity of the abdomen, and grow. *Tubular pregnancy*—(see Fig. 24)—It is not denied that this may occur. *Interstitial pregnancy* is when the ovum goes along the tube to the uterus and attaches itself in the interstices of the body of the uterus. All these are matters somewhat disputed, but it is pretty well established that they will occur sometimes.

The signs of these preternatural pregnancies are not very conclusive. The catamenia generally continues; but there are pains in the hypo-gastric region, also more or less nausea, and vomiting, and very distressing symptoms. A tumor generally appears in the region of the extra-uterine fetus. That tumor may grow, and we not know whether it is the result of pregnancy or not. It is difficult to distinguish between the different forms of these extra-uterine pregnancies, we can only know that there is one, but whether it is abdominal, tubular, or interstitial, and it is of no practical importance to know which of them it is, for they generally prove fatal, as it is almost impossible to operate for them. They generally terminate before the sixth month. The

fetus usually dies about the third month, and assumes various forms. It may become a mass of fatty substance, or it may become cartilagenous, mixed with hair. It may be calcarious mixed with hair. The longest hair I ever saw on an infant was on an extra-uterine fetus. It may increase, or it may become consolidated, and remain for ten or twenty years, or terminate fatally in a very short time.

It may assume the form of water. VOLCE mentions a case where one hundred and fifty pounds of fluid were taken from the abdominal cavity. I saw the substance from one woman, which was a mixture of calcarious material and hair—the hair being fourteen inches long.

They assume all these various forms, but generally terminate fatally: though the patient may live a long time, sometimes twenty, thirty, or even fifty years; or it may pass off suddenly, and the patient get well.

But, I have known of two individuals who had every appearance of pregnancy, in whom it has ceased growing, and they are now in a healthy condition. You are directed by some to operate in such cases, and by others to wait.

Now, the results of operations are so unfavorable, that I would not advise you to try it. I would rather risk nature to do the work, because we know that a great many cases have lived on after the pregnancy for years—that, not so many prove fatal when let alone, as when operated on. In fact, I do not recollect one, where operations have been performed, that lived any length of time. Better let nature take her own course

FALSE PAINS.

Although pregnancy is a natural state, and nature has provisions for most of the contingencies of this condition, yet there are some unpleasant attendants and symptoms that require medical attention. Among the most important of these is what is called *false pains*, which occur generally during the last months of gestation, but particularly in the last few weeks. These pains

sometimes become very severe, and are not unfrequently mistaken for true labor pains.

The cause of these is generally dependent upon fatigue, or imprudent exercise of the woman, or an extra relaxed state, or habit of the body. When the fetus has attained near its mature size, it becomes very burdensome and oppressive to the mother. The uterus and abdominal parietes now begin to experience the state of things which must soon be the cause of the expulsion of the fetus, and, it is by no means strange, to find these organs responding to similar impressions before the full time arrives. Any circumstance, therefore, that will tend to render the now nearly extraneous incumbent less endurable, may give rise to pains of an expulsive character. This over exertion, and a relaxed state of the body, serve as causes of *false pains*.

Many remedies have been in use to obviate the occurrence of these pains, and with varied effects. What is called *Mother's Cordial* is a very good article for this use. This article is variously compounded. This preparation combines excellent diuretic, anodyne, and some tonic qualities.

The denarcotized extract of opium (Kost's Anodyne) with camphor is, however, the most reliable remedy for false pains, as well as after pains.

During the last few months, I have used, in connection with this course, another mode of treatment, which I will recommend here with great confidence, and I am very earnest in the hope that you will receive it, and use it. It is the hydropathic plan of treatment; occasional bathing of the surface of the body in cold water—generally in the morning; but, in addition to this, use the sitz bath, or, as sometimes called, the hip bath; use this as often as twice a day, for several weeks previous to labor, and, in fact, whenever occasion requires, during all the time of uterine gestation. The patient will not complain after becoming accustomed to it, and after a while she will love it, and want to remain in it for an hour. After breakfast is the best time for this, when the patient has had exercise enough to make her comfortably warm, but not too hot; and also at night, before going to bed.

Do not be afraid to let her sit right down, and if she feels any bearing down pains, it will, almost invariably, give relief. Dr HUNT has been practicing on this plan for months, and has no difficulty at all. And, when labor comes on, they go through it in half the usual time. The bath has the effect of strengthening the parts, and also decreases their sensibility, and they usually get about much sooner, too, after labor. I knew one lady who took her regular baths during pregnancy; the labor pains came at eight o'clock, and the delivery was effected, and she got up at nine and took her bath. Now, a few years ago, this would have been considered most presumptuous. Why, they were not allowed to put their feet in cold water. Such an act would have been thought certain death. They were not even allowed to have the floor washed up after labor. You may not only have the floor washed up, but have them take a sitz bath, next morning. It will strengthen the patient greatly, and she will recover much faster. I would urge this treatment with a great deal of force, and, that you may understand more in detail of the *modus operandi* of using the water, I would recommend you to obtain the books that treat on the subject. It is true, these books recommend the treatment rather extravagantly, but you must exercise your good sense in its application. However, if you have used it all the time of gestation, it will do no harm.

But if the patient can not get up to take a sitz bath, you can substitute wet bandages around the parts, and over the pelvis—these are always most debilitated. But I have not time here to lecture on hydropathy. I can only recommend it to you.

Dr. MORROW was in the habit of giving his patients *black cohosh* for some time before labor, in the form of an infusion, often, until it produced a condition of dizziness of the head.

As I remarked before, he was very successful in this way; in a practice of twenty-five years, never having lost a single case, where he attended all the time. He was in the habit of giving them this; and he supposed it had the effect of preparing them for labor; and, judging from the facts, we have great reason for believing that it will do much good. There is no objection to

using this internal means in connection with the hydropathy Dr. HUNT was a student, and for a long time, a partner of Dr. MORROW'S, but was induced, by experience in the utility of the water, to leave off the other remedies, and to rely on the hydro-pathic treatment altogether, as the preparatory means for rendering labor easy.

LECTURE XIV.

LABOR.

After what has been said of *false pains*, you will see the importance of guarding against deception, as these false pains may continue long, before true labor commences. You must, therefore, be careful in your diagnosis, and, even when you have made up your mind, keep it to yourself, and, if questioned, give an evasive answer. You can do this without telling them a falsehood; for, in truth, you may say that the labor has not advanced far enough to know. You can say, you do not perceive anything wrong, and yet, keep to yourself the fact that you do not *know* all to be right. There is no harm in this.

The regularity of the labor pains is a matter of considerable interest. The cause of this, as in many other cases, cannot easily be explained. My explanation for this is, that nature designed it should be so. We might as well try to ascertain the reason why the grass grows. We know, that, under some circumstances, grass will grow, and, under others, it will not; but we cannot tell why grass will grow in some kinds of soil, and not in others. And so with labor; if the woman is in a proper condition, the pains will be regular. It is our business to learn how these things take place; not, *why* they do. It is certain, that the pains increase as the womb advances in its contractions, and the weakest pains occur when the womb is most distended with water. The first pains are very weak, in accordance with the rule I have just given you. And when there is great indisposition of the uterus to contract, we can overcome this, by rupturing the membranes; but, as a general thing, this is wrong,

and we should delay as long as possible. As the labor progresses, the pains increase, and the whole womb contracts; but the cervix dilates towards the latter end of the pains. You will remember just now, that I said the pains lasted from fifteen to forty seconds. You will then understand that the uterus commences to contract all at once—fundus, body, and neck—and while this continues there can be no progress towards dilatation of the os uteri; and, if this state of things were to continue, the labor never could be completed. But the cervix ceases to contract during the latter half of the pain, say, if the pain lasts thirty seconds, the whole uterus contracts for fifteen seconds; and, after this, the fundus and body continue to contract, while the cervix dilates.

Now, I remarked sometime since, that, if you required the patient to bear down in the early part of the labor, she could not, and would not; if she could, it would do no good, because there is not sufficient dilatation of the os uteri—the uterus is too high up. If she were to bear down, by contracting the abdomen, while the fetus is above the *straits*, it would do more harm than good; but after the labor is advanced, it may do considerable good. In directing her to exert herself to bear down, you should keep in mind what I have just told you, that the whole uterus contracts in the first half of the pain, and that the neck ceases to contract in the latter half, and dilates; then, if the pains last thirty seconds, let her bear down during the latter fifteen, and it will aid very much in the dilatation; but before this, it is useless, and will exhaust the woman.

Towards the end of the labor, when the head has been forced into the os uteri, *abdominal* pushing is very great on the whole mass of the uterus, and it has been crowded down into the pelvis. At this time, the os uteri decends very low, and the anterior *margin* may be felt under the pubic arch, you will find the os uteri dilating. The head has not yet passed through; but as soon as it dilates sufficiently to pass you can feel only a *very thin* margin of it, as it passes back over the head.

It may clasp the child's head, but the neck does not contract with much force. At this stage of the labor, the fundus is four and a half inches from the neck. Before this they were further apart, but when the head passes through, the longitudinal fibres contract; hence, it is very much shortened longitudinally, and distended laterally, immediately after the head has passed through the os uteri; the thorax takes its passage, and it is not very long before the abdomen traverses the os uteri, and, next, the extremities: and then, if there is no obstruction, the child passes out immediately, and nothing remains but the placenta, the membranes, and a little blood. The womb contracts strongly at the last throes of labor, and generally detaches the placenta, and it will be thrown off, or remain partly in the uterus and partly in the vagina.

Thus, I have described a regular, natural labor, but have said nothing of the variations; of these we will speak hereafter. The removal of the placenta is usually followed by a flow of blood, generally from the placenta, perhaps it may be from the placental surface of the uterus. If it has been thrown out immediately after the child, there will but very little blood escape.

The placenta, you will recollect, is fifteen or twenty inches in circumference, and, of course, is liable to become ruptured immediately by the contraction of uterus. The child is passive while in the uterus, and gives no voluntary assistance in its expulsion. This is a matter of dispute among authors; but common sense will teach us that the child can do nothing, yet a living child is much more easily born than a dead one—this is very reasonable; the living child possesses some firmness of muscle, and does not give way to the contractions of the uterus, whereas, the dead child readily yields to the contractions of the uterus.

In the early part of labor, the womb contracts upon its entire extent, but afterwards, the fundus contracts on the back of the child, causing its spine to reflex, so that the head is thrust forward very considerably, and thus the child is brought more

into a line corresponding with the axis of the pelvis. The chin is flexed on the breast of the child, and the occiput is directed forward. This part of the head is much projected, and the head of the child assumes a shape adapted to the passage through the straits of the pelvis. Thus, the head sometimes is found to have a diameter three times as great from the chin to the occiput, as that from the forehead to the margin of the neck.

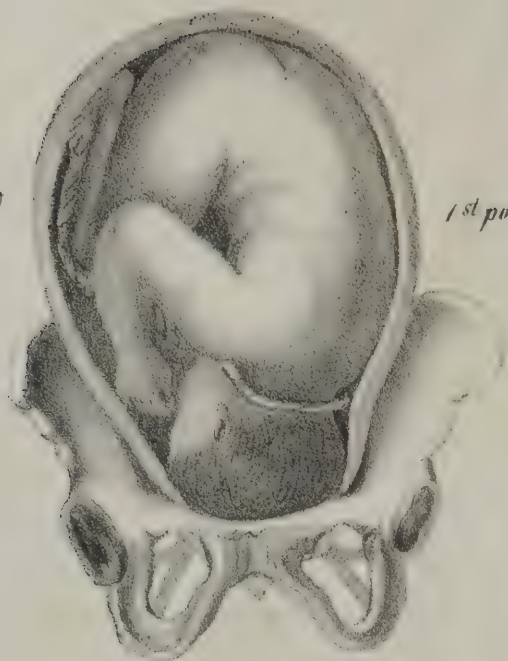
Having thus described the natural passage of the child in birth, without manual assistance, we are now brought to a point where I can describe the office and duties of the accoucheur.

I will first call your attention to the matter of position, and presentation. Position is the location of the child in reference to the surrounding parts. Presentation refers to the direction or presentation of parts, as, the *occiput* or *face*, in the movement of the child. It generally relates more to the parts first appearing, or, to those parts most in advance in birth. The natural position, (we presume it is the natural position, because the larger number of children rest in this position,) is that with the head downwards, and the feet upwards, with the chin flexed upon the breast, and as it passes down, the face is backwards, and the spine a little curved anteriorly. Now, about nineteen cases out of twenty present in this position. The forehead usually turns to the left side of the sacrum, though it may turn to the right. Why it should turn to the left instead of the right side, I do not know. However, it is supposed to be, because the rectum fills the opposite space; and, yet, we have no better explanation as to why this should be so.

In a large number of cases—seven thousand—nine hundred and eighty-four presented in a vertex position.

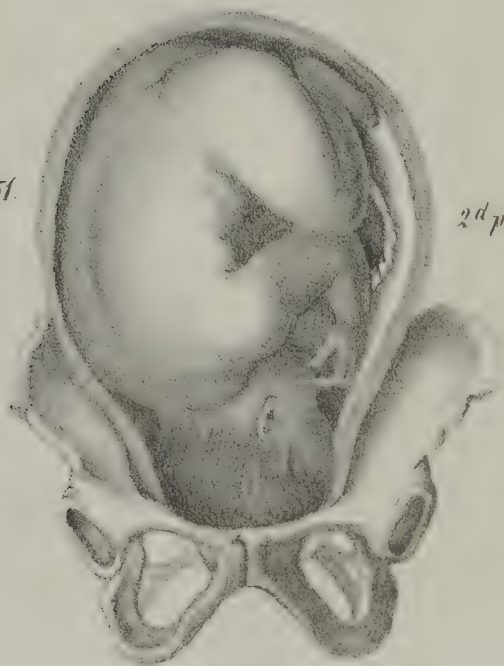
The presentations are numbered, first, second, third, etc., in accordance with the frequency of their occurrence. We will illustrate the presentations, by the use of the female *manikin*, in our next lecture.

50



1st position of the head

51.



2^d position of the head.

LECTURE XV.

PRESENTATIONS AND POSITIONS.

We have, first, the *head* presentation, which gives us four positions at the upper strait; hence, the four kinds of natural presentations of the head.

1. In the first, the occiput is situated forward and to the left, and corresponds to the inner part of the cotyloid cavity of the left side, and the face looks toward the right sacro-iliac symphysis. This is the *left occipito-cotyloid position*. (See *Plate XXI, Figure 50*.)

2. In the second, the occiput is placed to the right and forward, to the inner part of the right cotyloid cavity. This is the *right occipito-cotyloid position*. (See *Plate XXI, Fig. 51*.)

3. In the third, the occiput is situated backward and to the right, and corresponds to the right sacro-iliac symphysis. This is the *right occipito-sacro-iliac position*. (See *Plate XXII, Figure 52*.)

4. In the fourth, the occiput is placed to the left and backward, and looks to the left sacro-iliac symphysis. It is the *left occipito-sacro-iliac position*. (See *Plate XXII, Figure 53*.)

First position of the Vertex. It may be observed, that, in this presentation, the sagittal suture is in relation with the oblique diameter of the pelvis, which proceeds from the inner part of the left cotyloid cavity, to the right sacro-iliac symphysis. In consequence of the labor, and the contractions of the uterus, the head vibrates in this position, and, by this motion, the posterior fontanelle, which is forward, describes a line, curved

from above downward, and from the left forward, to come towards the sub-pubic opening, while the anterior fontanelle, which is situated posteriorly, also describes a curved line, in the opposite direction exactly. By this motion the occiput is depressed under the symphysis pubis, while the chin tends to re-ascend towards the sacro-vertebral prominence, being bent forcibly on the chest; this diminishes the antero-posterior diameter of the head, in the same proportion, which being then situated between the two tuberosities of the ischium, soon projects from the external organs of generation. It now appears in the form of a rounded, shining, and more or less bulging tumor. The accoucheur must be careful to sustain it, by placing the hand across the perineum, in order that the child's head, which is then pushed by very rapid and quick contractions, may be rightly directed, and to pass freely through the external organs, in the direction of the axis of the inferior or perineal strait.

The head thus emerged moves quickly, turning so that the occiput presents to the left thigh, and, in this way, accommodating the shoulders to the pelvic cavity.

Second position of the Vertex. Next to the foregoing, this is the most common position. In this, the sagittal suture is situated diagonally in the direction of the oblique diameter, which extends from the right cotyloid cavity to the left sacro-iliac symphysis. The posterior fontanelle looks forward, and the anterior backward, as in the preceding position. In this, the mechanism of labor takes place exactly as in the first presentation, with this difference—that, when the head of the child is delivered, the occiput is turned to the right, as it was to the left in the preceding. In this position, the shoulders appear and the labor terminates precisely as in the first.

Third position of the Vertex.—In this, as in the next, or fourth position also, the situation of the head at the superior strait is directly opposite to what it was in the first and second positions. In these latter, the occiput was situated at the anterior part of the pelvis; in the two now to be described, it looks toward the posterior part.

3^d position of the head



52

4th position of the head



53

As the head of the child progresses through the pelvis, the posterior fontanelle is depressed in the cavity of the sacrum, while the anterior, as it approaches the arch of the pubis, constantly rises towards the symphysis pubis. As the labor progresses further, the occiput is forced upon the coxyx and perenium, and distends the latter very much, presenting the appearance of a large tumor. The forehead seems now to rest stationary upon the arch of the pubis, while the occiput is describing a forward motion toward the vulva.

In passing forward, the head, now in its escape from the inferior strait, also turns so as to accommodate the shoulders to the pelvic cavity. The face presents toward the inside of left thigh, and the occiput toward that of the right. The left shoulder will now be under the arch of the pubis, and the right toward the posterior commissure. The labor will now soon be completed by the passage of the body of the child, which is thus born with the face forward.

Fourth position of the Vertex.—The saggital suture, in this position, is parallel to one of the oblique diameters of the pelvis, the posterior fontanelle being situated to the right and backward, and the anterior to the left and forward. The mechanism of the labor is thus the same as in the third position; the occiput being backward and the face forward toward the pubis. But as the head is thrust out, it turns in the opposite direction from that taken in the third position—the face being in this case turned toward the right thigh, and the occiput toward the left.

It may be remarked, that in the two latter positions, there is, often, a somewhat different movement in the expulsion of the head, from that just described. In the last motion, the head, instead of the forehead resting stationary upon the pubis, while the occiput is passing forward upon the perineum, this latter will press tightly into the sacral cavity, while the face passes the pubis and the chin is thrust over the anterior margin of this bone, when, by the advancement of labor, the head is thrust forward face foremost.

After labor is completed, there is a repose generally of eight

or ten minutes, at the expiration of which time pains come on again, and expel the placenta and membranes. This is a general rule; but there are exceptions. With some it is several hours before the placenta is expelled; but these are less common.

It may be proper, at this point, as we have not done it as yet, to give some directions respecting the manner of making examinations, and some of the other particulars connected with labor. *Touch* is a technicality you should all understand. It means making examinations. This is done by introducing one or more fingers into the vagina. (*See Fig. 48.*) To prepare yourself for this, have a little sweet oil or lard wherewith to grease your hand. The hand must be warmed, and simply holding it to the fire will not always do; you might, by touching a female with a cold hand, produce a disagreeable chill. You should hold your hand for some time in water as hot as you can bear it, then lubricate it well with the grease, and seating yourself in such a position by the patient that your face will be toward her face, arrange it so that you can use your right hand—that is, if you are right-handed; if not, use your left hand. You, of course, can judge more correctly by using the hand in which the sense of touch is more acute, or the one you are most in the habit of using. Then direct your patient to lie on her back, and draw up her knees. You will then introduce your hand under the thigh, and, during the time of a pain, introduce one or two fingers, and examine around, and make all the discoveries that are necessary as to the position of the head, the condition of the soft parts, whether there is relaxation or rigidity, whether there is a sufficient amount of mucous to lubricate the parts, whether the perineum is rigid or not. Your examination should be made in the presence of some third person—the husband or some female friend—but do not hesitate to make the examination, even if there is no one present, if circumstances require. If, when the labor is about to be completed, the pains are extended, you can do much by friction over the region of the uterus. You should avoid introducing the hand into the vagina too often, or handling the parts too much, as this causes irritation of the parts, and also rigidity.

Just after the child is expelled, it is important that the tonic contractions should take place, so that, while you attend to the child with one hand, have the other over the uterus, grasping the abdomen sufficiently hard, if necessary, to give her pain. This will excite the contractions of the uterus, and, in fact, will insure them. By this precaution hemorrhage may often be prevented, and thus even life saved that might otherwise be endangered.

THE LOCHIA.

What is meant by the lochia, is a peculiar discharge which always, in a healthy condition, takes place immediately after labor—a sero-mucous discharge. It is at first similar to blood, like the menstrual discharge, but finally becomes much paler, till at length it loses its color entirely. This discharge generally lasts from eight to ten days. It is said to come from the womb. It seems to be necessary to drain the system of the fluids which it contains during gestation, but must now be thrown off, or it becomes a source of disease. It seems to be one of the natural functions, just as much as the menses. If it continues longer than ten days, it is considered a diseased condition; though there are females who have continued longer than that, and seemed to be in good health. If it should be accompanied by debility, you should treat her for it. Give her tonics. The cold hip-bath will frequently arrest this, and if taken properly will arrest it suddenly. At the same time you may give her port wine or ale. If the stomach and bowels are deranged, and the patient is costive, you should evacuate the stomach and bowels. It is as well to give an emetic, followed by a cathartic; or, if the patient is weak, evacuate the bowels by an injection. The best tonic I have ever used is the *Senecia Gracalis*, which, in consequence of its great virtue as a medicine for restoring the regular return of the menses, has taken the name of *female regulator*. An infusion of this may be employed, or it may be used as a sirup, given pretty freely. I have known cases where there was not only an exces-

sive lochia, but accompanied by hemorrhage, and it would arrest it immediately. I have also used *Hamamelis*, and I speak of this as being valuable in hemorrhage. I have not used this much, but it is highly recommended by others.

The continuance of lochia in excess is attended with debility, and you must use such means as will correct the state of the system, and these will generally be tonics. Bathing is also a matter of great importance. I have simply directed the patient to bathe in an alkali three times a day. The bathing should be conducted in a proper manner, as recommended in my work on surgery. What I mean is, not so much in reference to temperature, as it is dexterity in application, to be followed by friction. Even ice-water may be applied in that way without debilitating the patient; but generally cold water is best. I am inclined to think that a large majority of cases may be entirely relieved by the hip-bath, or, if this is inconvenient, a cold wet towel about the hips. Always, when using cold wet bandages, you should cover it with a dry cloth—flannel is best, it not being so good a conductor of heat. The *Helonius Dioica*, which was recommended as being valuable for preventing abortion, is also a valuable article in this case, and in arresting hemorrhage. An article that is useful in arresting hemorrhage will also be useful in cases of excessive lochia. I was induced to use this from its effects in hemorrhage. I do not recollect to have failed to arrest excessive menstruation by this article.

The conducting of a labor is what refers to the accoucheur or practitioner in connection with a labor, and comprises all that it is necessary to do from the commencement of labor until the child is born, dressed, and put to bed; this, of course, includes the removal of the placenta and the membranes, for this must be done before the child is put to bed. The attention of the practitioner is as necessary to the child after birth as to the mother.

Now, there is a medium between all extremes, and especially does this refer to the conducting of labor. A person may interfere too much, and thereby do mischief; or he may do too little. The motto has gone abroad, that "a meddling midwife has

done much harm." But there may be much harm done by not interfering enough—by neglect. Of course, if a man does not know how to act, he had better let the matter alone, and leave the work to nature; but I speak of persons who know their business. Yet even such persons may neglect to do enough. Now, it is not every case of difficult labor that requires interference; nor is it every case of natural labor that is an easy one. What we mean by a natural labor, is one which may be completed by the natural efforts of the mother. Of course, then, a preternatural one is one that will not be completed without interference; and I may repeat that natural labor is not easy. A little interference on the part of the accoucheur, and a little attention, will greatly facilitate the labor, and save the patient a great deal of pain, so that it is not exactly true, that where we do interfere it is preternatural. It is only preternatural where the labor would not be completed without interference.

LECTURE XVI.

NERVOUSNESS.

During the progress of labor, it not unfrequently happens that there is much nervous and vascular excitement. This, as a general thing, does not require much attention; yet it may go on to an alarming extent, producing delirium, headache, great uneasiness, occasional fainting, and twitching of the tendons. Now, when these, or a considerable number of these come on at once, it is time something was done; but even then a bystander may, by attending to a few trifling matters, soon dissipate the symptoms, as by ventilating the room, giving the patient some cold water, or by bathing her head for a time in cold water. However, if the headache is obstinate, and if you have time before the labor, give her a cathartic—the kind we are in the habit of using. The compound sirup of senna, castor oil, or even senna alone, will operate in an hour and a half. But if there is not time for this, give an injection or two.

To facilitate the operation of the cathartic, you may use stimulating injections. You may combine these with lobelia; an infusion of it will facilitate very much the action of the cathartic. Thus I almost invariably relieve the patient without any difficulty. You should never keep a patient long in one position, unless extraordinary circumstances require it. Let her get up and walk about the house; let her shift her position any way she pleases, unless some circumstance forbids it—and this is rarely the case. If there is much rigidity of the soft parts, and hard pulse, together with more or less excitement, give nauseating doses—small doses of our common emetic, and a simple combination of lobelia.

I have been in the habit of using our common emetic, and lobelia tinctured in vinegar. I value this; it has the best effect. However, use any nauseating agent. But I would advise, by all means, to use lobelia: for it will equalize the circulation, without debilitating the patient. It also has the tendency to increase labor pains. I have used it for that very purpose, and have never been deceived. Lobelia may be carried to the extent of producing prostration of the muscular system, but in this combination I have mentioned, it never produces this effect.

Where you have rigidity of the soft parts, you must understand that costiveness is the result of pressure of the uterus upon the rectum. You should evacuate the rectum by injections. But if you have time, give a cathartic. If the circulation is unequal, the extremities cold, and too much heat to the head and pelvis, you should carry nausea to the effect of vomiting the patient pretty freely. This will prevent the determination of the blood to the head; and although, during a fit of vomiting, there will be a rush of blood to the head, it soon passes off. There may, however, be cases in which it is better not to use this. In these cases, the books of the old school recommend bleeding; but nothing could be worse. It depletes the whole system, and produces dangerous relaxation; whereas, you may produce relaxation by nausea, from the effects of which the patient will soon recover; and it is a good practice, recommended by all authorities, to use cathartics where there is costiveness, but I would deprecate bleeding in all cases. You can do more by nausea, and fomentations over the parts, than you can by bleeding under any circumstances, and at the same time leave no bad impressions on the system. I have before mentioned the importance of elecampane in the form of a fomentation; and whenever I refer to a fomentation over the pudendum, I intend to refer to this. If you cannot get this, use any bitter herbs. Stramonium is good; yet it sometimes produces constitutional effects, but generally it does not. In all cases where the labor is protracted, the bowels should be evacuated, either by cathartics or by injections. There will be accumulations which will do more or less harm. If at any

time during labor there comes on severe acidity of the stomach, give an effervescent dose. You may use tartaric acid and saleratus, or you may use the acid with carbonate of soda. I prefer the saleratus; but, in giving this, you are to consult the nature of the case. The saleratus alone will do better, the object being to neutralize the acid; so, if you combine the two equally it will do no good. My rule is, to put in an excess of the alkali, after the effervescence has ceased. I always put in an excess of the alkali. Under ordinary circumstances, I would not recommend an alkali for a sour stomach, as a curative means, it is only good for the time being. You should never starve your patient because she is a long time in labor; the idea that she can labor for a day or two without food is absurd, just as much so as to suppose that a man can labor hard without eating. Let her have light food, such as is nourishing and sufficient. Sometimes it occurs during labor, that there is a good deal of nausea and tendency to vomit, and this may occur though you have given an emetic—yet, generally, an emetic will allay it—but, sometimes, you may allay it by giving an aromatic, such as the essence of anise, fennel, lavender, or peppermint. A few drops of Professor Kost's Nitro-pyroxilic oil will be almost certain to obviate the nausea, or even vomiting.

A T T I T U D E .

The attitude of the patient is a matter of some importance. In the old authors, the plan is to lay the patient on the left side. I let the patient take any position in which it is possible for the labor to go on, if she has a choice; but, if it is left to me, I direct her to lie on her back. There may be some difficulty in this, but it is most convenient; do as you please, however. You have high authority for laying her on her left side; but I have never found it so convenient on either side. She must have some choice in it, after all, as to whether she shall lie down at all, or not. If she wishes, let her stand on her hands and knees, and this is probably the easiest position. Others

choose to walk about, and stand on their feet at the time of being delivered. I know of one woman who always will have her way, and always will stand on her hands and knees, and has had a great many children, too.

As to the seat, couch, or bed on which the patient should be placed; I always leave it to her choice also, if, only, she is placed in such a position that I can do my duty.

LECTURE XVII.

OBLIQUITIES OF THE UTERUS.

These may occur before quickening, but are met with oftener afterwards, and may happen at any period between this and the time of labor. It means, a turning over of the uterus from one side to the other. There are three kinds of obliquities: the first and second being where the uterus turns to the right or left side, and the third, where it is turned forward.

Now, it may be so situated that the head of the fetus will not enter the strait; or, may be so that the shoulder presentation follows as a consequence of the lateral obliquity. Whenever these occur, you must notice to which side the uterus is turned; you can tell by feeling the abdomen, the side to which it is turned being more bulged-out than the other. All you have to do, is to shift the position. If it is anterior, that is, if the muscles of the abdomen become relaxed so that the uterus projects forward, rising over the pelvic basin, you must elevate the pelvis, and, in the absence of pain, bear down upon the abdomen, to assist its muscles to return the uterus into its natural position. Towards the close of the labor she may be in such distress, and there will be so much soreness about the os-externum that she cannot keep still, and, at this time, it is very important to keep her still and in one position, so that when the child emerges, it may not be hurt. You must do what you can to keep her still, and this may make it necessary to place her on her back. If the head does not rotate at the proper time—as it does not always—you may introduce your hand, and, by examining, may find that it has not rotated.

You will find it is a very difficult matter if the head can not rotate, as it comes against the perineum, and, if you discover that it does not rightly incline, introduce your hand, in the absence of pain, and turn it over a little, and, when the pain comes on, it will rotate more. I would caution you not to rotate it too much at a time; you are not safe in rotating it more than one-fourth of a circle, for it is necessary to wait and let the body rotate. There is, sometimes, extreme rigidity of the labia and perineum. The os uteri and all the soft parts may be in a lax condition, while the labia and perineum remain rigid, and when the head comes down to them it can pass no further.

I would recommend the same treatment for this, as for the os uteri—fomentations and nauseating doses of lobelia, and, when it gets to this stage of the labor, I am not in the habit of waiting long, but give an emetic and produce vomiting, and it will soon relieve the patient.

I recollect having attended one case, at the second birth. The first time she had been attended by another physician, who had great difficulty, and called in counsel. She was in labor three or four days. Finally, however, they got through with it, and she was told, by the attending physicians, that she never could have a full-grown child born alive, owing to the smallness of the pelvis; and she had this impression fixed on her mind all the time, and thought that it would be so, and I could not make her believe otherwise. Well, the head passed down to the perineum and labia, and it happening to be a large child, she exclaimed, as it came to this point: "There, it is at the point where it stopped before. I told her I would relieve her in a minute. I poured out, at once, some emetic tincture—it was very strong, and enough for six ordinary doses—and I added a little warm water: This brought on most powerful pains and relaxation of the parts, and she forgot her fears. In a minute the head emerged, and in a few minutes afterwards was born without rupturing. The great difficulty in the first place was, that they had *bled* her, which caused great

debility, and, thus, she had not the power to bring forth. She remarked, just as she got through: "Oh! what a blessing it is to have some body that knows something." She thought it was the fault of a small pelvis, as the doctor had told her, but was now pleased to find it otherwise.

There is, sometimes, a great deal of delicacy felt by the patient in the presence of a stranger, in the early part of the labor, so much so that the pains will cease, and will not come on again so long as he remains; under such circumstances, absent yourself until the labor is far advanced. However, you should not leave the room till you have made examinations, and, if you find labor is not far progressed, you may then go away, and stay until the pains grow stronger.

It sometimes requires very great patience when the labor is tedious, but you must not be in a hurry, for you can do little to expedite it. It requires patience on the part of the woman, and the bystanders; and she will frequently be asking, "doctor, can't you help me," and the same impatience will be manifested by the bystanders. Now, under such circumstances, you can not reason with them, and, if you tell them the truth, they will discharge you, and another physician will be called, who will do nothing more than what you were doing. But it is your duty to gratify them, and, if you are satisfied that no medicine is necessary, do something: you should give something that is no medicine at all—a little pulverized sugar, or colored water will do them good, for it will satisfy them. I frequently give nothing but *water*. A little Raspberry tea is, however, beneficial sometimes. Do not give the patient medicine, because she asks for it, but give her something. Besides, some fatal accident might occur, and if you did not appear to be doing all you could, it would be attributed to your neglect. Now, you have to be there and spend your time, and you might as well be doing something, and what you give her is just as much medicine as if it were a powerful agent. It is a mental medicine, and that is all they want.

But the pains may be very weak, even where the patient

possesses strong physical force. Ergot is usually recommended, but any simple stimulant—a small portion of lobelia—will increase the labor pains. As I remarked before, lobelia has a fine effect; just given to the extent of producing its stimulating effects, will frequently bring on powerful contractions. Black pepper is a common domestic remedy, and will answer the purpose; but, when all these means fail, I would recommend ergot; yet I have never failed in the use of these means I have recommended.

It sometimes occurs, that the chord is wound around the child's neck, and, as the head emerges, it is drawn so strongly that the child cannot breathe. Under such circumstances, it is necessary for you to interfere. Take hold and pull upon one end, and then upon the other, till it is loose, and then slip it over the child's head. If this cannot be done, try to slip it over the shoulder.

Where the sub-pubal arch is low, there may be great pressure upon the perineum, you should use means to protect it; put your hand upon it, and hold back the labor, till all the relaxation possible has taken place. Sometimes the head comes down and the shoulders remain firmly in the pelvis. If this is the case, you can put in your finger and press upon the shoulder, so as to rotate the shoulders around, and thus accommodate them to the strait of the pelvis, or to the arch of the pubes; and, if you can put your finger in the armpit, do so, but do not pull hard enough to rupture the parts. I was called, last summer, to a case where the physician pulled so hard upon this part, that the arm was broken.

The child was six weeks old, at the time that I saw it, and, at that time, could not use its arm in the least. I don't know how it is now, but I doubt whether it can use it yet. You should be careful not to injure the child, yet you can use considerable force without any danger. I should never drag the child by force, unless there is great debility and an absolute necessity.

LECTURE XVIII.

ATTENTION TO THE CHILD.

After having completed the delivery, it becomes your duty to attend to the child, as well as the mother. As I remarked in my last lecture, attend to the child with one hand, and to the mother with the other. Place the hand over the abdomen and press downwards, in order to produce the tonic contractions; and, at the same time, attend to promote the breathing of the child. It very frequently happens that the child is in a state of asphyxia, and, if not attended to, will die before fully born; pass your hand over the mouth and nose, and remove the obstacles in the way of its breathing. The mouth is often found filled with slime, and, sometimes, also blood. The chord may be pressed so as to obstruct the circulation. After it has once breathed, it will generally squall; so you will know when it has breathed, and if, from that time, it does not continue to breathe, it will die. You must, then, protect the mouth and nose. As soon as it is born, lay it on the right side, so as to suppress the fetal circulation as soon as possible. If it does not breathe, use friction over the chest; have cold water convenient, and take some in your mouth and blow it in the face of the child. This gives a tremendous shock to any person. If your patient faints, sprinkle a little cold water in her face, and revive her. A small quantity thrown into the face in this way, is much better than a great deal dashed from a tumbler. If the child does not breathe now, blow gently into its mouth, and, at the same time, press on the abdomen, so as to produce artificial breathing. I have worked

in this way for half an hour, before the child would come too. Work with it till all signs of life have ceased. After respiration is established, examine the chord, and when all pulsation has ceased to the child's abdomen, tie the chord in two places. It may not always be necessary to tie two places, but you do not know. One ligature should be placed about an inch from the abdomen, and the other three-quarters of an inch from that: then cut between them. Now, if it is not tied next to the child, it may bleed, and the child may suffer. Some have bled to death in this way; and if you don't tie the other end, the blood may spirt out over everything around. But there may be another child, you don't know, and if there is one, and it is attached to the same placenta, it will bleed to death, from the the chord, if neglected: at any rate, it is always better to tie the chord in two places. When you have done this, the child should not lie there any longer in the fluids, but give it to the nurse; and, in handling it, you must remember it is slippery as an eel, and, if you are not careful, it will slip out of your hands, fall and kill itself; and if you do such a trick as that, you should never think of practicing medicine again. Take hold around the neck with the thumb and fore finger of one hand—letting the balance of the hand rest under the shoulders of the child—and with the other hand take the feet and legs. It is usual for some old lady to take the child—she has an apron for the purpose, in which you are to lay it. Direct her to lay the child on the right side; sometimes this precaution is not necessary, but by laying it on the left side, spasms may come on when the new circulation is not yet fully established.

Then your attention is to be directed to the mother. See that the after birth comes away; if it is long in coming away—if more than an hour—you may take it away gently. Take hold of the chord with the left hand, and sliding the fore fingers of the right along under the chord, until entered into the vagina, and by thus raising the placenta out of the basin of the lower strait, with the right hand, while you gently draw with the left, you will generally succeed in taking it away. But

should you fail, you must pass the hand into the uterus, gently, and hook your finger into the placenta, or grasp it in your hand, and thus pull it away gently. It is almost always the case, that the placenta is detached, and generally thrown down into the vagina, and may remain there for hours—for, although the pains come on in the uterus, there is no force there to push it away. I generally ascertain whether it is loose, and, if so, take it away immediately. If it has not left the uterus, you may give something to produce contractions. If you introduce your hand, that you may find the placenta, take hold of the chord and trace along till you come to it; hold the chord somewhat tightly. If the placenta is attached to the fundus of the uterus, pull gently, so as not to draw down or invert the fundus. If it is morbidly attached, so that the pains will not bring it away, introduce your hand until you reach the edge of the placenta and peel it off carefully. After having taken away the placenta, introduce your hand and feel around, to make sure that there be nothing left. This will frequently save your patient much trouble. You will know the placenta by its peculiar structure; it feels just like a bag of shot—I cannot compare it to any thing else—this character is owing to the blood vessels. You should notice this, the first patient you deliver, so as to remember it next time.

H O U R - G L A S S C O N T R A C T I O N .

The placenta may be attached so firmly as to remain obstinately, and when the attachment is in the upper portion of the uterus, and the latter contracts in its central fibers mostly, there will be what is called the *hour-glass contraction*—that is, the uterus contracts in the middle, while the lower end, or mouth, is relaxed, and the upper part contains the placenta. Sometimes the placenta is torn, and a part only adheres above, while the other part is contracted upon, below the central stricture. You are not safe, in such cases, till you have introduced your hand and taken away the placenta. You may have difficulty in this, on account of hemorrhage. I attended a case of

the kind in this city [Cincinnati;] there was great hemorrhage. Dr. CARTER, who had attended in the early part of the labor, though he had done all that any man could do, his hand had become so sore from the contractions of the uterus, that he could do nothing more, and after that, I worked till I was so crippled in my hand, also, that I could not use it for sometime. When the placenta is so firmly attached as not to come away without rupturing, it is better to let it remain and putrify, and come away of itself.

LECTURE XIX.

HEMORRHAGE.

The loss of blood, to some degree, is ever incident to childbirth, and is never much regarded, unless it should be too great. An ounce or two is generally passed from the ruptured parts. But, in some cases in which the uterus does not contract properly, there may be a free and even fatal flow of blood, and this condition is one ever in the mind of the practitioner. He regards this as one of the accidents of childbirth to be ever guarded against, and thus it has been long a practice of the old school to bleed their patients in childbirth, under the idea of thus lessening the quantity of the circulating fluid, so as to obviate the tendency of hemorrhage; and, when it has even occurred, they bleed to arrest it. Their rule is, to bleed until the patient faints, when the flow of blood will, usually, stop from the uterus. Thus, it is true, that fainting from bleeding will stop the hemorrhage; but there is great danger to the patient during the time of fainting, and I have known many cases of death, which, I positively believe, might be attributed to bleeding in *parturition*.

It has been recommended to use tampa, that is, pieces of cloth, or cotton, or some such substance, wet in cold water, so as to prevent the flow of blood, and cause it to coagulate. I have only to say, as before, never use the tampa, after the fifth month of pregnancy; if it is used after this time, by clogging the mouth of the uterus, the blood may accumulate to such an extent as to prove fatal, before you are aware of it. Leave it free, then, after this time, and let it flow away. Never, under any circumstances, use the tampa after this time, nor allow the nurse

to use the cloth, as they are prone to do, by crowding it up against the os-externum.

My rule is, to let it flow out, for we want to know if there is hemorrhage, and how much, so that we may use means to repress it. Crowding the vagina clogs up the mouth of the uterus, and, having no outlet, the blood collects and fills up the uterus, and prevents the after pains from coming on. You must ascertain whether the patient is in the habit of flooding at her delivery; and you should always know all about this—make inquiries in all cases, in time, before hand, whether you see anything of the kind or not. Some patients will go through the whole labor without losing a particle of blood, and afterwards have a severe hemorrhage; then, I would suggest, that if you have ascertained that there is danger, be ready with ergot—it is the safest means I know of. Have your ergot ready, and just as the head emerges—and you will always know this—give the ergot. Of course, you will know better than to give the ergot before the head has passed the perineum. Just after the labor is completed, give ergot in small quantities, once in every ten or fifteen minutes. An infusion of about twenty grains, in four tablespoonfulls of boiling water—it should be pulverized finely, and the strength is easily extracted. Dr. DEWEES recommends giving it all at once. I do not like this plan, but prefer giving it in small quantities, until it produces its specific effects—for no two women are alike—it may act too powerfully on some, and the safest plan is to give it in doses of about five grains, or in smaller quantities. When the ergotism, as it is called, is produced, that is, when the medicine has contracted the uterus down firmly, you will have no more hemorrhage. If there is flooding before delivery, she must be delivered as soon as possible. It may be necessary to introduce the forceps, or give ergot. If hemorrhage takes place before delivery of the after-birth, you must hurry this, for there is no certainty of arresting the hemorrhage until after every thing is extracted.

Capsicum is relied upon by many practitioners, and is often of more service than the ergot. In combination with lobelia, in the

form of the anti-spasmodic tincture, it is of great value, and will often arrest uterine hemorrhage, when other remedies fail. This tincture may be pushed to free vomiting, as the nausea and vomiting will be the most certain relief in this extremity.

AFTER ATTENTION TO THE MOTHER.

After the placenta is taken away, the woman is then to be put in a condition for rest. It is generally best to place her in bed. There may be cases, however, where the patient is so weak, and so prostrated, as to render it unsafe to move her. Under such circumstances, you should remove all the wet clothes, and put her in as comfortable a condition as possible, and let her remain in the same bed. But this is not very commonly necessary—I am speaking of ordinary cases—as soon as the after-birth—that is, the placenta and membranes are removed, and the after pains have come on—then put her to bed.

Now, what is meant by this? First, my rule is, to apply a wet bandage—of course, having her cleared of everything that would make her uncomfortable, such as the wet clothes, and all the blood—I apply the broad bandage over the abdomen, so as to compress the abdomen considerably, and keep the parts contracted, and they will press down on the uterus and prevent the muscles from becoming lax. Press down over the pubic region, and put a fold of several thicknesses over the uterus. These clothes should be wet in cold water. You need not be afraid of doing any harm by applying cold water. I know that the ladies present will be utterly astonished at you, for allowing the patient even to touch cold water, for they have not been accustomed to any such proceeding. They have sometimes asked if they might wash up the floor, saying, that they had known women to take cold from having the floor washed. There have, no doubt, been many cases where patients took cold from this cause, but the reason was, they had not been accustomed to use cold water, not even to drink it when thirsty; but have been in the habit of drinking a little cordial, or whisky and sugar—enough of itself

to make her take cold. But I recommend cold water, it will be more pleasant and less injurious. Wash around her chest, and even her whole body; but, if her feet be cold, it is better to wash them in warm water—wash every part where she needs any washing; then put a wet bandage, wrung out in cold water, over the abdomen; understand that, this bandage should be covered over by a dry one, so as to exclude the atmosphere.

She is apt to be rather lame around the sacral region—very sore, from hard labor—and nothing will do more to relieve her from this than cold bathing, or cold wet bandages. But if you allow this to come in contact with the atmosphere, she will become chilled. When this is done, she is washed off clean and dried: her under clothes shifted, and clean, dry ones put on her, and she into a clean, dry bed—we are presuming an ordinary case: but she should not be allowed to get up and walk about, for this might bring on severe hémorrhage, or prolapsus uteri; have assistance enough to lift her from one bed to another. Lay her in a horizontal position, with her head and shoulders as low as her feet, unless she is of a full habit, and too much blood to the head, or somewhat predisposed to apoplexy, then lay her head a little higher, and wet her head with cold water. There is a plan which I pursue in putting women to bed, or rather in preparing them to be put to bed, which you will not find in any of your books. I have been in the habit of giving it in my lectures to the class. She is generally dressed up with some clothes not designed to be worn afterwards.

The loose gown is generally somewhat like a coat; then comes the next garment to be taken off, and the skirt around the waist must be unpinned, and in getting off all these things, you have got to disturb and turn her about a great deal, and she becomes so much fatigued that you cannot remove her from the bed. Now, I have been in the habit of preparing for all this before hand, by having her put on the things she is going to wear afterwards—everything she is to have on when put to bed. These should all be raised up under the arms, so as to be out of the way entirely of the fluids, while the labor is going on; then a

sheet should be pinned around her, just above the hips; put the pin as nearly as possible over the spine, and remember yourself, or inform the nurse, which way the head is placed, so that it may be unpinned by simply putting the hand under, without disturbing the patient. Have the sheet to lap a little, so that it will be sure to go clear under. Then, when the labor is over and you have got through, all you have to do, is to unpin this, instead of having to take off all her clothes, and put on clean ones, rolling and tumbling her about. All you have to do, is to take away one thing and everything is on her, clean and dry, and she may even lie in that same bed.

Now, the first time I directed this arrangement to be made, there were several ladies present and they very soon saw the propriety of the plan, though they had never heard of the like before, and I heard some of them say, "Now, he knows something." They admired it very much, and it was not long before it was talked all over the neighborhood, and it gave me a reputation; and I have heard the same things of other students. Now this would, it is true, seem a mere trifle; but, I tell you, trifles make the physician, and, at the same time, contribute to the comfort of the patient. This was the third case I ever attended, and my idea was, to get rid of the trouble of dressing and undressing so much, and I have always followed it since, where I have the opportunity beforehand.* After having attended to this, then comes your attention to the child—to the washing of which you must give some attention, as the nurse is not always acquainted with her business.

* There is much difference in the manner in which the patient is handled, and in the way that the preparations for parturition are made. The clothes of the woman, those of the bed, the position and conduct of the woman, as well as that of any other assistants in the room, are all the subjects of the physician's attention; and although he may not dictate in a way contrary to the manifest inclinations or notions of those about him, and especially not to those of his patient, yet he can; generally, have his way. Thus, every practitioner has generally his own method; and these methods, as just stated, often differ extremely.

Some physicians require a great deal of preparation, and "*fixing*," and afterwards require as much *un-fixing*, while others make but little change necessary. Child-birth, in the general way, is but a very simple affair—so simple, indeed, that very little preparation is usually necessary. There are practitioners who never change the clothes, either of the patient, the bed, or his own, and yet, there may not be the least sign of a stain of wet.

Besides all this, the person of the parturient woman need never be exposed in the least.

When the time comes on for the "waters to break," the patient may be so situated as to let these pass upon a cloth, or this may be otherwise provided for. But, as the waters do not often pass until just at the time the birth takes place, the same provision which protects the bed, or the carpet, from the fluids then escaping, will also receive these. As a convenience for this purpose the practitioner may carry a piece of oiled silk, (which, when folded, will not occupy more space than the size of a hen's egg.) This silk material may be in a piece about one yard square, and may be spread in the bed under the covers, having a sheet folded or twisted, and laid around the circumference, and under the margin of the silk-cloth, so as to constitute a basin. Let the hips of the woman rest over this elevated margin of the basin, so that her back may thus receive the pressure which is so generally required at this point; and thus, while the arrangement contributes to the comfort of the patient, it protects the bed entirely. The clothes of the woman having been raised under her, and properly spread, extending from the superior margin of the basin toward her waist. After the placenta comes away, this silk cloth is taken up and removed, and proper cloths put in its place—the folded sheet having also been removed. Thus parturition may be accomplished, without staining, or wetting the carpet, bed, or clothes of the patient.—REVISOR.

LECTURE XX.

WASHING AND DRESSING OF THE CHILD.

The child is, not unfrequently, covered over with a white crust-like gluey substance, about the consistency of milk curd. You cannot wash this off with simple soap and water; you must first oil it with sweet oil, if you have it, if not, use common lard; after you have oiled it, you may then use soap and warm water, just as you would in washing off tar. It is necessary that you have the water with which the child is washed the right temperature; at any rate, not too hot, for water that would not in the least effect your hand, may scald the child severely. In testing the temperature of water, apply it to the hollow of your arm—that point being very tender—or, you may apply it to any part of the body that is very little exposed. I have known children to be scalded, and result in inflammation, by having the water too hot. The nurse who is in the habit of cooking over the fire, and frequently putting her hand into warm water, cannot tell when it is warm enough to hurt the child, and there is no danger that they will have the water too cold; yet, it is better to have it too cold than too warm. You should see to this washing: if there are any wrinkles about the neck, or under the arm, or if this substance is left about the eyes, have it washed off carefully, for, if it remains, it will produce inflammation or an eruption. See if there are any bruises about the head, and, if so, bathe them in spirits of camphor, or the tincture of myrrh, or an infusion of marigold, or some other article which you use in other cases of contusion. But these will not give you much

trouble, they will get over it very readily. When the child is washed and dressed, the women present will call on you to dress the naval string. This they all know how to do, but if you are a young man, they want to find out whether you know anything or not. Now, when you come to this, you must do it exactly right, and, if you do not, they will know it, and will laugh at you. If you do it right, they will conclude that you know your business. If they are people of taste, they will give you a piece of very fine linen, laid aside for the purpose, but they may give you a piece of cotton cloth; this will do just as well. Never call for linen when the people are poor, for they may not have it. It only requires a piece of soft cloth.

It only requires a piece of cloth to interpose between the remaining stump of the umbilical chord and the abdomen of the child, and another fold to pass over the top of the chord, to interpose between this and the bandage. You can take a cloth and fold it once or twice, and form an oblong square, say, two by four inches. Then cut a hole in the center of one end for the stump of the umbilicus; pass the latter through it, and then fold or lay the other end of the cloth over the top, and it is ready for the bandage. A little grease or oil around the hole cut for the umbilicus is advisable. Do this all in the presence of the ladies, just as though you knew all about it.

You should have a pair of scissors in your vest pocket, so as not to have to pull out a case of instruments, for some people are horror struck at the sight of them, and will be frightened. This is all you have got to do—they will put on the bandage. This should not be tied so tight as to prevent all action of the abdominal muscles, this will give the child the colic, and they will make it sick by giving it catnip tea, while all the trouble is originating from having the bandage too tight. When this is done, you have done with the child.

DIRECTIONS TO THE NURSE.

I believe we had got through with the immediate attentions to the mother and the child, and have come now to speak of what is necessary to be directed to the nurse. First, the subject of diet for the child is of importance. The proper diet for the child is that which nature has prepared for it—the milk of the mother—and, if the mother has not that, give it cold water, a teaspoonful—never give it anything else—never go to giving it hot stuff; but learn to be a cold-water-man forthwith—also, give the mother cold water to drink. This will save a good deal of physicing. Just as quick as the mother is put to bed, put the child to the breast, whether she has milk or not; but if she has milk, this will aid very much in its secretion, and if you feed the child some days before nursing, ten chances to one that it will not nurse at all. You will be apt to have great trouble in teaching it to take the breast. But if there is no milk in the mother's breast, give it new cow's milk, this, however, should be about half water; let the water be hot, and slightly sweetened with loaf sugar; for mother's milk is sweeter than cow's milk; it possesses more saccharine matter, with less of the cheese. These directions you should give to the nurse, but caution her against feeding too much, as this is too often done. I stood by once, and saw the child of my sister die, and I firmly believe that it was fed to death by its kind grandmother, who thought she was doing right, of course.

The child will eat as long as you will give it anything to eat. It is like a little bird; it does not know when it has enough. A teaspoonful of milk, once in every three hours, is enough; and as a general rule, you should feed it once in three hours; if not, you will be apt to give it too much when you do feed it. It requires food much oftener than grown persons, for digestion goes on much faster in it. If the child cries, give it water, for it may be thirsty, and milk will not allay its thirst. I have no doubt but infants are frequently allowed to suffer from thirst, and if it is thirsty, the breast will not stop its crying. It will take

too much milk into its stomach, before it can get enough water from its evaporation—all the aqueous and serous secretions go on very rapidly in the infant, and, for this reason, nature has supplied it with milk with a large proportion of serum. You all know, that young calves will not do well on milk alone, though they will live—and so will a child—but they will not do as well, without water.

LECTURE XXI.

THE DIET OF THE MOTHER.

This should be light for eight or ten days. You need not confine her entirely to a vegetable diet, but such as is not of too stimulating a character; keep her food free from all such stimulating articles as pepper and spices. It is true, some women will take pork and beans, immediately after delivery, without any harm, but in the present day in civilized society, such cases are exceptions to the general rule. If after a woman has gone through a hard labor and is fatigued, you overload her stomach with food, you bring on disease—yet, if she is very weak and debilitated from severe hemorrhage, give her much more stimulating food. I do not mean those stimulants which should be used as medicines alone, for, such articles as pepper, spice, etc., are not food, they possess no nutrition whatever, and should be used only as medicine. But, if she is weak from hemorrhage, give her nourishing diet, such as meat, that easily digests. The room in which she lies should be well ventillated. And, as a general rule, under favorable circumstances, after the third day, let her get up and sit in a rocking chair. Now, there are many cases where that will not do, but you must exercise your judgment in these matters. If you can possibly avoid it, never put a patient in a stove room, especially where there is a cook-stove, and where cooking is going on; and, if in a stove room at all, keep it at an even temperature. We are usually directed in books, to give a cathartic about the third day, and many of our physicians are in the habit of doing so. Dr. MORROW did it in-

variably. He also gave cathartics beforehand, and this was supposed by some to be the ground of his unparalleled success; but, really, I have not found it necessary to give cathartics after delivery. I give cathartics, not as a matter of course, but in case of disease, as I would at any other time: but if you will give her plenty of cold water, and bathe her properly, nine chances out of ten, she will get along well, and need nothing else. If you have to give her a cathartic, by no means give castor oil, though this is recommended in your books. If you give her any kind of oil, give her linseed oil. But a better medicine than anything is something that will operate quickly, and leave the secretions all in an active and healthy condition. Castor oil only lubricates the bowels, and leaves them in a dry, feverish condition. I have attended cases of puerperal fever, which, I have no doubt, were caused by this injudicious use of castor oil. I give the compound syrup of senna, rhubarb, and jalap, in the form of a concentrated syrup, until it operates freely. Then, if this is followed by a diarrhea, as it frequently is, you may give her linseed oil, with good effect, or castor oil with some aromatic essential oil—the oil of wintergreen, or cinnamon, at the rate of about two drachms to the pint of castor oil. I make this addition, for two reasons; one is, it allays that griping effect of the castor oil, and the other is, it makes it more pleasant to the taste: in fact, the patient will not know that she is taking castor oil.

Never give the patient magnesia as a cathartic. Now, I know this is directly contrary to the directions in your books; but wherever you find a patient that has eaten a great deal of chalk and magnesia beforehand, will have a child coated over with the white crust that I spoke of, while it is decidedly injurious to both mother and child. If she has rested well, and is pretty strong, she may get up and have her bed made—let her, at the same time, before returning to bed again, take a cold hip bath. Now, this would be startling to the ladies present, but never mind; take on yourself the responsibility, for there is no danger in cold water applied in this way, but will have a tendency to strengthen her. It may not be very cold—say, let it stand over night in

the house—afterwards, however, she may take it cold. Understand, you have had on the wet bandage before; this will get hot after it has been on for some time; take it off and let it cool, and put on a new one again. Let her continue in the hip bath ten or fifteen minutes, wipe off briskly, and let her go to bed. Now, I have no doubt, if women had been using the hydropathic treatment for the last ten years, our practice in obstetrics and female diseases would be about done: it would require about that time to ruin us. We would have no more cases of prolapsus uteri, and excessive lochia, etc. You recollect that I have defined the lochia to be a discharge from the uterus after confinement, and generally has some appearance of blood, but not very dark, and gradually becoming lighter, until it ceases. I also stated, that if it continued over ten days, it was considered an unhealthy condition. When it is excessive, you must use means to arrest it. It sometimes runs into hemorrhage; in that case, you may sometimes stop it by local means. If these fail, inject into the vagina and uterus some astringent, white oak bark in the form of an infusion; an infusion of the geranium, or a weak infusion of matico; the marsh rosemary; all these are excellent remedies. Introduce a catheter into the vagina and uterus, and inject some one of these astringents, and, at the same time, give her some strengthening medicines, such as wine-cordial. *Senecia gracalis* is one of the best things I have ever used. I have used it with *trillium*; perhaps, a compound of the two is better than either alone.

This first article is very strengthening to the organs of generation, and, owing to its fine effect on menstruation, is known under the name of “female regulator.” Excessive lochia may depend on a non-contracted and flabby state of the uterus, and, in this case, there is danger of hemorrhage.

Introduce the catheter and inject astringent tonics: give small portions of quinine, from one to two grains, or of the tincture of kino, eight or ten drops; this, continued for several days, will generally succeed. If there is any general constitutional derangement, if it indicates a cathartic, give it; or, it may be

necessary to give an emetic; you need not be afraid to give any thing now, more than at any other time. If she is debilitated, use general tonics, and bathe her in cold water; not in the form of a shower-bath, but a gentle hand-bath. Bathe the whole surface, and apply bandages around the abdomen and over the region of the uterus and pelvis. At the same time, give such medicines internally as the nature of the case requires. If she has feverish symptoms, you must not give internal tonics, but must use something to reduce the circulation. Often, a bad state of the fluids exists, and when this is the case, fever will come on. She will be costive, or may have diarrhea. I have found the best means, under such circumstances, to give a cathartic of podophyllin and cream of tartar. If she is feverish, give her a good cold bath, followed by quinine, should the symptoms indicate an intermittent form.

LECTURE XXII.

CONCEALED HEMORRHAGE.

Sometimes hemorrhage occurs during labor. This hemorrhage occurs between the inner surface of the placenta and the uterus. The placenta becomes peeled off from the surface of the uterus near its middle, and remains attached only at its outer edges. Now, you recollect that the placenta is from five to seven inches in diameter; so that there is a considerable space under this, and hemorrhage may go on there to an extent sufficient to bleed the patient to death, without any appearance of hemorrhage externally; and, by collecting to such an extent in the uterus as to prevent the contractions, which is the only means of suppressing it. You will be warned of this condition by the appearance of the patient. She will become pale; pulse irregular and fluttering, attended with sinking and fainting. When you discover these symptoms, make an examination. You will find a tumor on the inside of the abdomen; detach the placenta and take it away, and thus, by removing it, you will bring on contractions of the uterus, and the hemorrhage will cease. You are never to suppose that, because there is no external hemorrhage, that it is not going on, for she may be in this condition, and any practitioner that will go away and leave the patient, before the placenta is detached, is totally unfit to practice medicine. I can think of no apology that would justify him in leaving a case, under such circumstances. Never leave her under two hours after the labor is completed, if you can possibly avoid it, unless you can leave her in the care of some one else upon whom you can rely.

P L A C E N T A P R Æ V I A .

This is another circumstance connected with labor, which I might as well mention here. This is the attachment of the placenta over the mouth of the uterus. In this case the danger is principally to the child; not to the mother. When the neck of the uterus begins to extend, from the growth of the fetus, the placenta becomes partially detached, and this causes a slight flow of blood. If you are called to a lady who is flooding after the fifth month, you may suspect this condition. But as soon as there is circulation, by making an examination, you can feel the placenta. You will all recollect the description I gave of it, as resembling a *bag of shot* to the touch, so there is no necessity of being deceived. All you can do is to direct the patient to keep still. Keep her cool by injections, and in a horizontal position as much as possible; give anodynes. Lobelia is very good to keep her nervous system quiet. Make her sleep all you can, not by morphine, but, you may, however, give her Kost's anodyne, in one-half grain doses, repeated once in four or five hours. The extract of the lady-slipper will answer a very good purpose, but not quite as good as Kost's extract of the poppy. But I wish to direct your attention more directly to the time of confinement. If you know of this condition beforehand, you should direct, that, if there are the least symptoms of labor, to call you at once; and make your calculations to be there as soon as possible, for the life of the child depends on your close attention. When you arrive, deliver as soon as possible. If you can, detach a small portion of the placenta; introduce your hand, turn and deliver; hasten, as much as possible, for, when the placenta is detached, the child, having lost its connection with the mother, if not delivered immediately, will die. If there is no rigidity of the soft parts you may give ergot, and hurry the labor through in two or three minutes; or, if practicable, put in the forceps and deliver in a few minutes. Warn the friends that the child

will probably die, so that you will be excused, should it so turn out. But do not do any thing to hazard the life of the mother to save the child. Do not force the uterus, if it is not dilated sufficiently, do not attempt to disengage it, for either would hazard the mother's life; and, as I said before, the life of the mother is worth ten thousand children, for you don't know but the child is dead at any rate, or, if living, it may be worthless. You exchange a certainty for a great uncertainty. I know I am running counter to the teaching and practice of many others. But this is my advice, and if they don't want me, under such circumstances, they can let me alone. Save the child if you can, but save the mother anyhow.

AFTERPAINS.

I have told you before what afterpains are, and what to do for them. They will cause the patient great distress, but you ought not too soon to interfere. You should promote the tonic contractions, and, if there is no hemorrhage, there will be little or no afterpains.

If the hemorrhage has ceased, and the afterpains continue, you may use means to stop them: give the anodyne I have before referred to, in connection with camphor; one-half grain of the former to two of the latter. Give a dose of this, and if the pains do not cease in half an hour, give another dose. You may have to continue this for some time, though I have never had to give more than five doses; but it may fail entirely. A medicine that will operate in some cases, will fail in others. You may give lobelia in combination with the anodyne, half a grain of the anodyne to five grains of lobelia. I have allayed the pains by other means, but a difficulty with it is, that they return as soon as the effects of the medicine have passed off, but it is less the case with this remedy. I have, however, had a few cases that appeared quite singular to me; instead of ordinary afterpains, in the uterus and the muscles of the abdomen, these would be absent

while there would be regular periodical pains in the region of the coccyx. I had a case of the kind a short time ago, which I treated in the same way that I do ordinary afterpains, and the patient was soon relieved. I recollect hearing Prof. BALDRIGE mention similar cases, yet I have never had but one or two of the kind myself. You may be somewhat puzzled under such circumstances, but if you treat them as you would afterpains, you will have but little difficulty. Afterpains sometimes continue, and the uterus refuses to contract, although it is stated that these pains are produced by contractions of the uterus.

A strong astringent injection into the uterus will bring on the contractions. A decoction of bayberry and golden seal is good for this purpose—inject this into the uterus. It will cause the pain and contractions to go on together. I tried this a short time since, with very satisfactory results.

SUPPRESSION OF URINE.

You will occasionally meet with a case of suppression of urine. When this occurs, you may suppose it to be from injury the parts have sustained during labor, but this is not always the case. It may be from a want of the secretion. You will not find in all such cases, a suppression in the bladder, but the patient may complain, as though there was an obstruction in the bladder. Give the common diuretics, as oil of juniper, clevers, or queen of the meadow, or the parsley-root infusion: the watermelon seed answers the purpose very well. You may use spirits of niter, or turpentine, but there are some patients who cannot bear spirits of niter or turpentine, while others take both with impunity. Apply warm fomentations over the bladder—onion poultice is a common remedy, and a good one. Direct them to use this in connection with other means. I might have mentioned before, that it is a common thing for the ladies present to ask you if you are not going to physic the child—to give it something to purge, because they have been in the habit of seeing this done; but this is rarely necessary. As soon as it is dressed, give it

cold water, and apply it to the breast. Breast milk is the best cathartic you can give it. Children are too often physiced too much. If you do give it anything as a cathartic, let it be a mild one—the elixir of senna—something that is mild and through with its operations very soon. I have not given a cathartic to an infant in three years, and doubt whether I ever shall again.

LECTURE XXIII.

FACE PRESENTATION.

We were speaking of natural labor; we now come to consider those which are still called natural, but which are more difficult.

We also consider these accidental. The natural position of the child, as I have before remarked, being with the head downwards, the breech upwards, and the chin flexed on the breast—as a matter of course, a vertex presentation. We stated that about forty-nine out of fifty presented in this way—all others being considered accidental, though not preternatural. In face presentations extension takes place too early. In the natural presentation the chin does not depart from the breast till the head has passed out, that is, extension begins to take place just as the head emerges; it does not, however, depart from the breast at once, but slowly. When this extension takes place too early, the head departs from the breast before it sinks down into the pelvis, and the forehead comes into contact with the ilia, and, consequently, the face emerges first. In making an examination, the first point that will be touched in a face presentation is the top of the forehead, that is the lowest down.

The fronte-mental diameter, that is, from the os frontis to the chin, does not enter parallel with the lowest strait—often the forehead is forced down, and the chin sinks lowest. In all such presentations the chin emerges first, then the mouth, nose, forehead, and, last of all, the crown of the head. If you recollect, in other cases, instead of the chin emerging first, we have the nose, mouth, and, lastly, the chin, but just the reverse in this

case. Now, in this presentation, the forehead is at first lowest, but, as it sinks down, the chin comes first. A somewhat difficult presentation. The forehead first, lowest, the chin sinks down and rotation takes place—the chin should rotate under the arch of the pubes, and the vertex thrown back.

In all cases, if you can so manage it, bring the chin under the arch of the pubis; if not, you will find great difficulty. The extension of the neck is so great that it will be very liable to injure the child.

We have four face presentations: first, the forehead to the left side; second, the forehead to the right side; third, the forehead to the pubis; and, fourth, the forehead to the sacrum. These are numbered in accordance with the frequency of their occurrence. You will now see how this is:

First, it has the first position: The head comes down with the chin flexed on the breast—the forehead comes down the right sacro-iliac symphysis; it takes the first position, but before it gets down below this point, the chin departs from the breast, and is pushed out, so that the forehead comes in contact with the opposite side of the pelvis. The chin begins to sink down, and the face presents, and, where we would look for the posterior fontanelle, we find the forehead. Suppose the chin has departed too soon from the breast, the consequence is, the forehead is fixed here. Another case: suppose it was this presentation, coming right straight down, but extension has taken place too soon, and the head sinks down, all on account of extension taking place too soon, and the chin's departing from the breast; it might come along in this way, but, by some accident, it is thrown back.

Thus, the face presentation is a difficult one, though not absolutely an impracticable one. Without we have a long diameter present, to a short diameter of the pelvis, it can usually be got along with, for the shape of the head will change very much by the over-lapping of the sutures, thus accommodating itself to the diameters of the pelvis. Now, suppose we have the first face presentation; it may go on well enough, and as it passes down into the

pelvis, rotation takes place, still with the chin down, the chin on the breast, but rotation takes place, then it sinks still lower down, till the breast comes in contact with the pubis, and there stops; however, lower down than that, the chin will escape under the arch of the pubis, as soon as it rises up. First, the forehead, then the nose, mouth, and chin.

The mechanism of the second is precisely the same as the first, but is more difficult. The forehead becoming fixed on the pubic arch, there are many cases where it becomes impossible for the child to be born, unless it is shifted. You must interfere, and push it around, so that the head will come upon the first, and push on the head or chin, so as to bring the perpendicular diameter of the head into the oblique diameter of the pelvis, it becomes first or second. Where the forehead passes through, there must be great distention of the neck, and in this case the neck must be distended far enough to pass out, over the perineum, so that the extension of the neck must be between the sacrum and the perineum. It may be necessary to introduce forceps, and turn the head around, so as to make it shape itself to the position. But a large majority of cases of face presentations will be completed by the natural efforts.

When you discover you have such a presentation, you may anticipate difficulty; but you must not interfere till you see it necessary—wait awhile. If it has come down, generally it will be completed without your assistance, yet you may use some little effort, so as to project the chin.

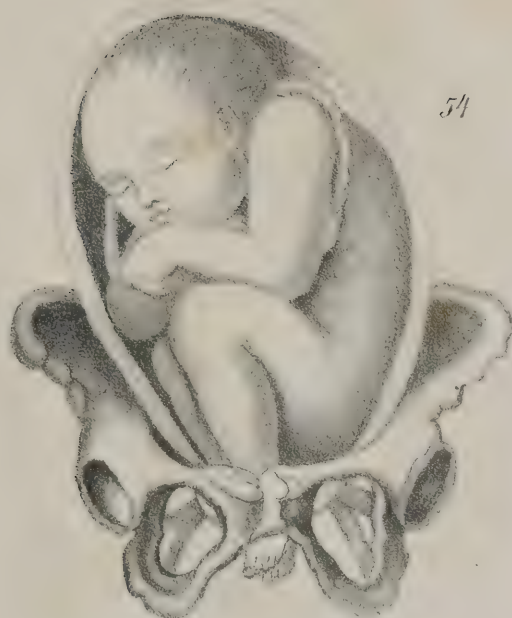
Whatever face presentation you have, see that you bring the face to escape the pubic arch, so as to prevent the chin from locking upon it, and you will succeed.

LECTURE XXIV.

BREECH PRESENTATION.

One case out of fifty will be breech presentation; that is, it does not average more than that; and, therefore, you ought to understand this presentation better than any other; that is, the theoretical part of it, as you will be likely to have but little practical knowledge of it; yet, your very first case may be of this kind. The danger of breech presentations is to the child; the principal danger being asphyxia, caused by the compression of the chord. The chord may be too short, so as to put it considerably on the stretch, or cause its rupture, or, as the abdomen passes out, carrying the chord before the head, when this comes in the outlet, the chord is compressed, and the circulation retarded. If this continues long, the child will certainly die. The danger then is to the child, not to the mother. You should always make known to the patient, or some responsible person, the condition of the presentation, and, in doing this, you must not say that there is a breech presentation, for you would not be understood. The common expression is, "the child is being born feet foremost." After having informed them of the presentation and the danger, if the child is *still-born* they will not blame you so much. Immediately, then, on discovering that it is a breech presentation, inform them that the child will probably die. You should never bring down the feet, unless it is necessary for you to use the feet to turn the head under the arch of the pubis; if so, you are justified, if not, you should not bring down the feet, as long as the child remains doubled up; for while it remains in this condition, the dilatation necessary to allow the

Position of the Feet.

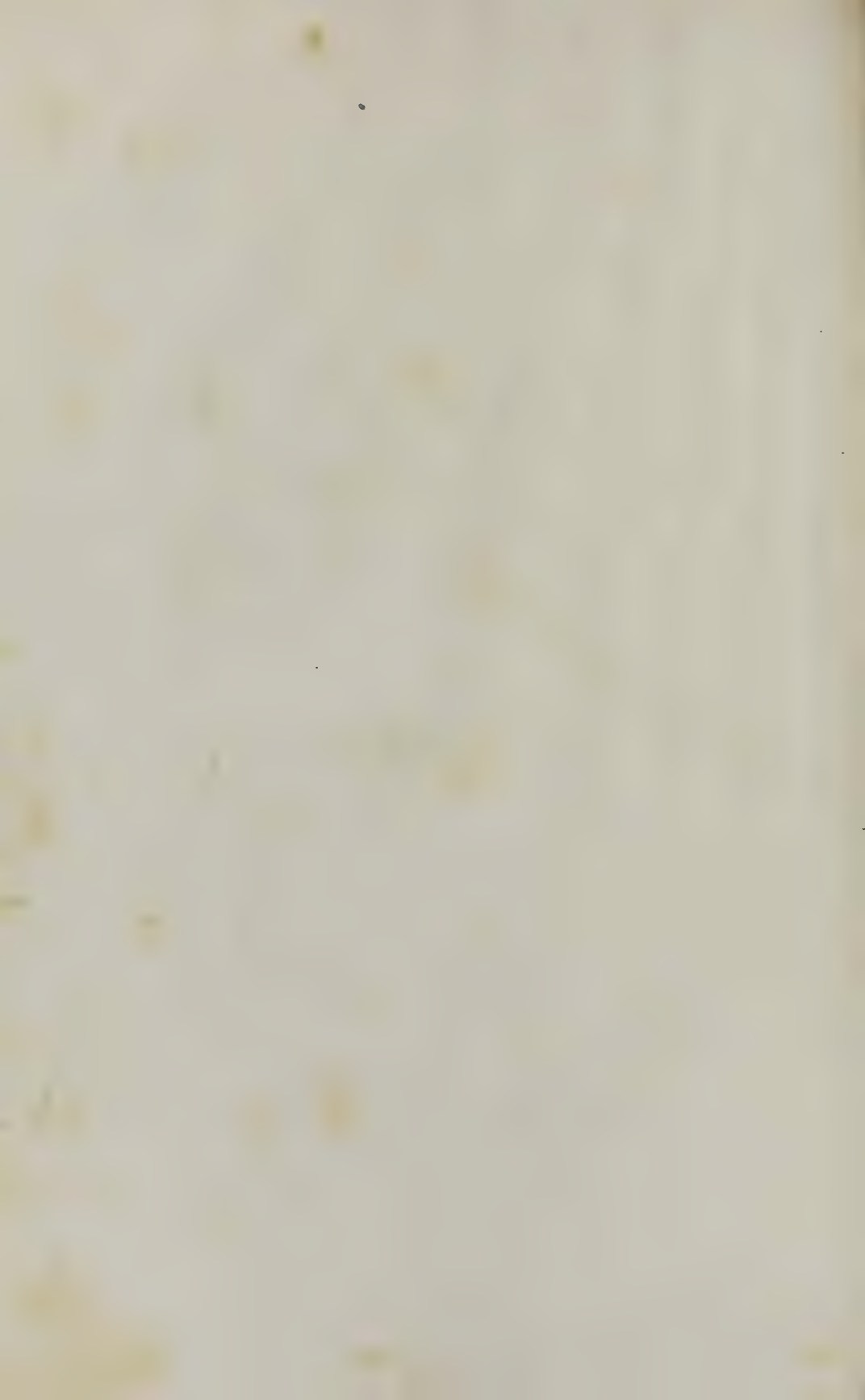


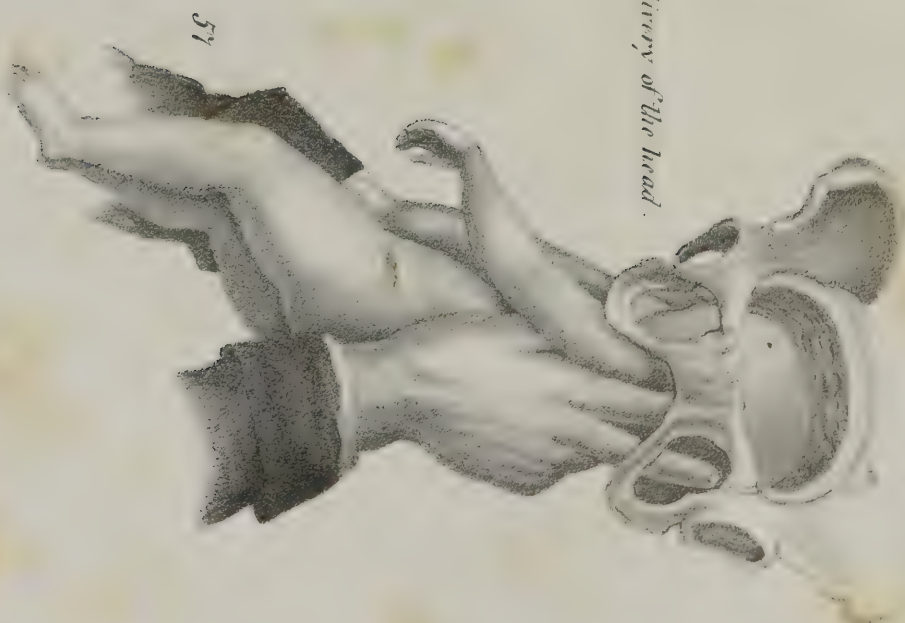
54

Position of the thighs.



55

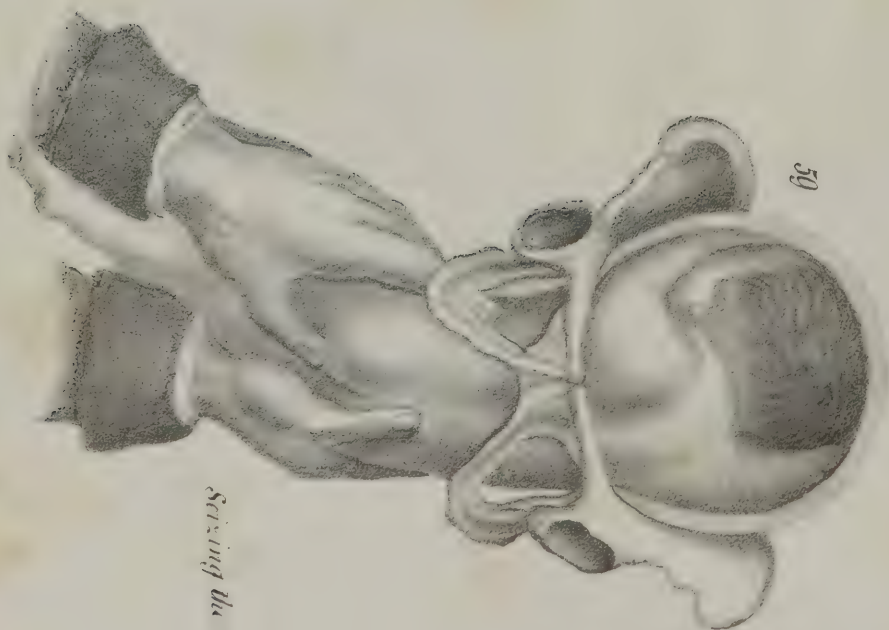


Delivery of the arm*Delivery of the head*

*Seizing the foot
in the 1st position*



58



59

*Seizing the foot
in the 2nd position*

body to pass with thighs upon the abdomen, will be so great that the head will pass, without materially compressing the chord; but, if the feet come down first, the dilatation will be so small that the head must remain there for some time.

There are four breech presentations: first and second, the spine to the right and left sides; third, the spine to the arch of the pubis, and the fourth, where the spine presents to the sacrum. Now, as we remarked with regard to face presentations, so of these, they will not always be exact, but frequently between these points, so that it will even be difficult to determine which presentation it is. But these are the positions noticed in your books.

In conducting a labor in breech presentation, it is, as a general rule, desirable to let the child come forward in that way, as there is usually no trouble, when attention is given to the bringing down of the limbs in time. The legs should be brought out as early as practicable. This may be done so soon as the body has passed down low enough to admit of a flexion backwards, so as to give distance for the passage of the feet. (*See Fig. 63.*) Then the arms should be brought down, if convenient. But it is not really necessary to bring the arms out upon the abdomen, for they come forward easily upon the chest, when the child is not inordinately large for the passage. One thing is to be borne in mind, however, immediately upon the delivery of the legs, and that is, to have the arms so brought down as not to lap upon the head, as this passes into the upper strait.

After the limbs are brought down, the next attention is to be given to the entrance of the head into the pelvic cavity. The chin is to be brought down in advance. If the face looks upward, there is a necessity of early attention to right the matter. The finger must be passed up into the mouth of the child, and, a purchase being thus obtained, the chin can usually be brought down without much difficulty. It is always advisable to favor the birth, in this case, with the face of the child backwards, on either side of the line of the spine. *Plate XXIV.* is seen a representation of the maneuver in this case.

Figure 57 shows the attention to the chin, while figure 56 shows how the arm is to be taken hold of so as to be brought down, while the neck is in the lower strait. If, however, the before-mentioned directions can be attended to, that is, that the arms be seized, at an earlier period, and brought down before they lap upon the head, in the pelvis, it is much better.

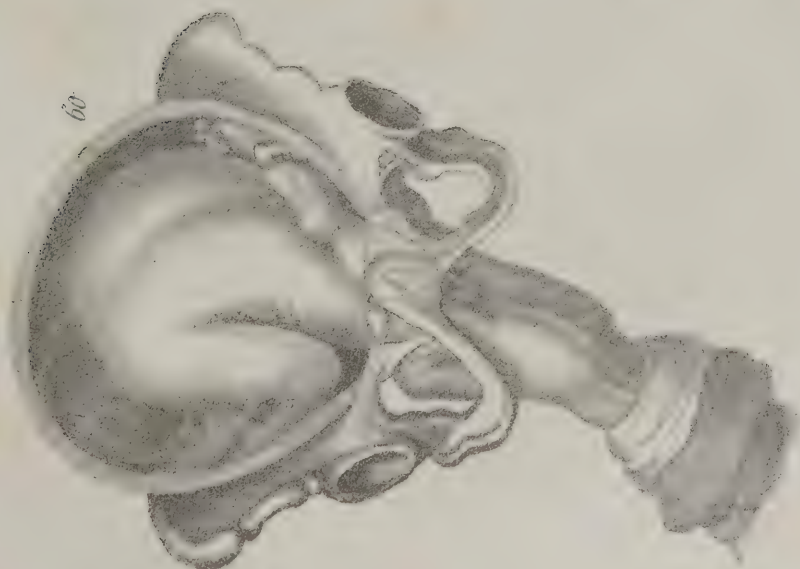
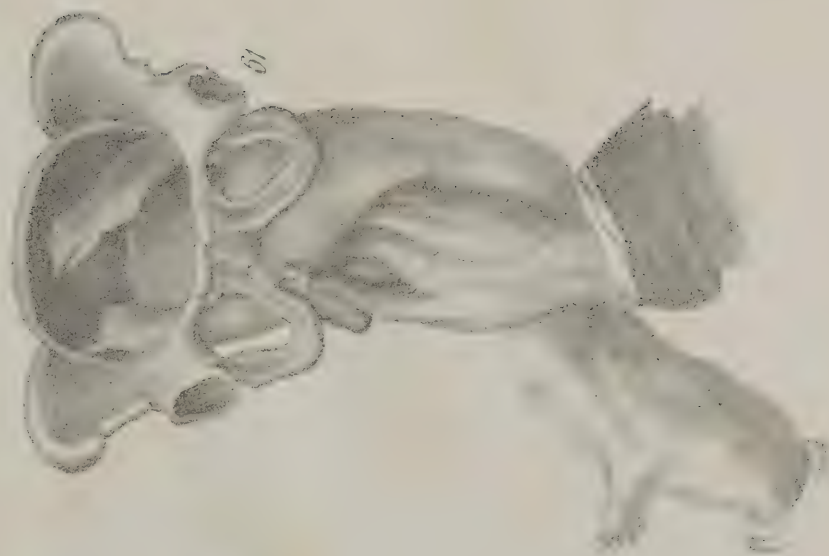
Feet Presentation. This is sometimes called *presentation of the extremities*, and includes, when thus called, the presentation of the feet, knees, and breech. But, in this place, I will speak only of those cases in which the feet and knees are presented. There are four positions of the feet which indicate the position of the child, in reference to the direction of its face or front. But I will not discriminate, in this regard, further than to say, that it is desirable to have the face of the child in the direction of one of the sacro-iliac directions, thus to prevent the locking of the chin upon the pubis.

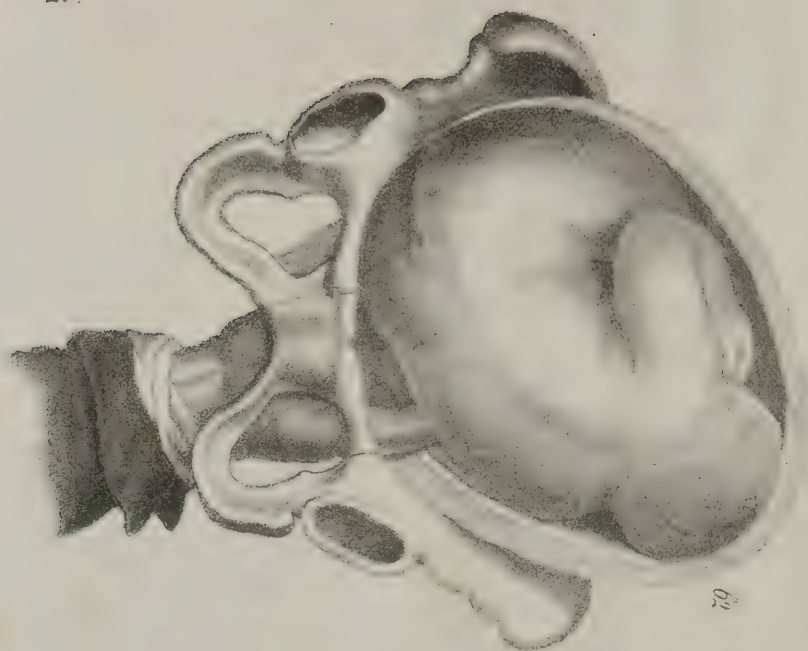
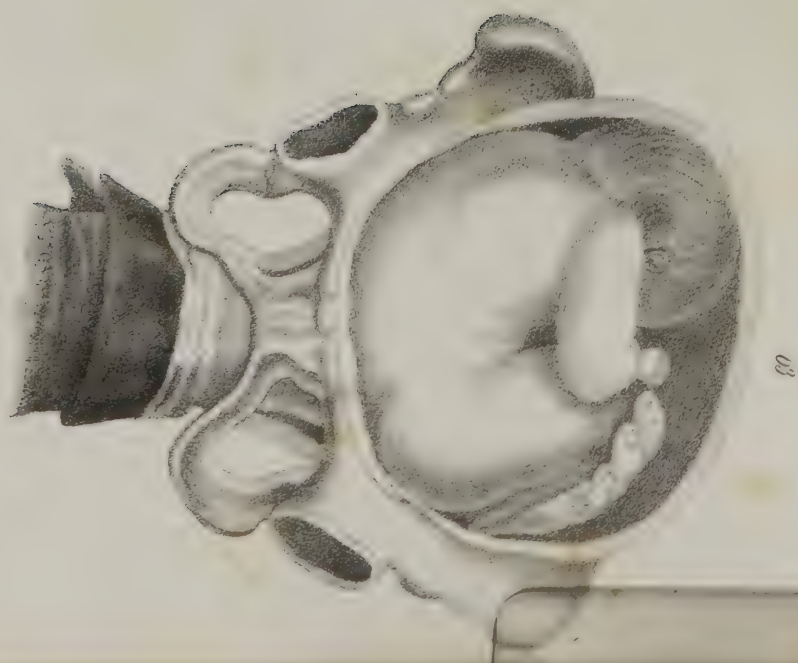
To proceed, the hand is passed up into the uterus, and the feet are seized in a manner so as to place the index finger between the legs above the ankle. By a gentle grasp, thus, the feet may be brought down, as shown in *Fig. 58* of *Plate XXV*. As the child is brought down, the trunk is taken hold of, as shown in *Fig. 59* of the same plate.

The seizure of the knees may be seen in *Fig. 60*, *Plate XXVI*. When the legs are brought down by this seizure, the balance of the maneuver is the same as above.

PRETERNATURAL LABOR.

We come next to notice preternatural labors. Those we have just described, may be aided considerably by interference on the part of the accoucheur, and much pain and suffering to the mother be obviated, yet they would all be completed by the natural efforts; but when we speak of preternatural labors, we mean such as, under the circumstances, could not be completed without interference, such as would result in the death of the mother or child, or both. In case of hemorrhage, where, if hemorrhage did not ex-

Seizing the knees.*Disengaging the feet.*

1st position of the back*2^d position of the back*

ist, in due time, the labor might be completed; yet owing to the hemorrhage it is now necessary to interfere, lest the patient would die from loss of blood. Of course, this would be called a preternatural labor, yet all presumed to be accidental.

SHOULDER PRESENTATION.

In this case, the labor positively could not be completed without assistance. The head passes down, doubled upon the body, and, as the labor goes on, the shoulder comes down into the straits, and it is impossible for the head and body both to go down together. There may be several positions, and you should understand them. These are arranged in the same order as the others. First: it would be a departure from the first vertex presentation. We have the shoulder down; but authors differ in this: first, head to the left; left shoulder down; face in front: next, head to the right; left shoulder down; face to the back: next, head to the left; face in front.

Now, if you discover the shoulder to be down, you may ascertain which it is by noticing the hand. You see, if the thumb looks to the left side, you know the face must be in the direction of the palm of the hand and the thumb. But suppose the back of the hand out, and the thumb to the right side, you know that it is the right shoulder.

Just think of these positions awhile, and you will never forget them. It is important that you understand these matters, so as to know how to get hold of the child.

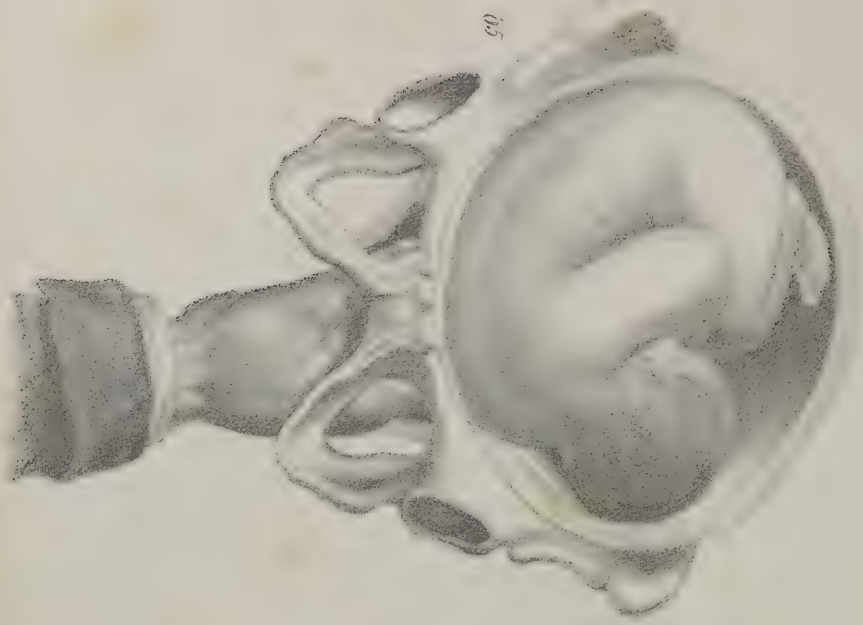
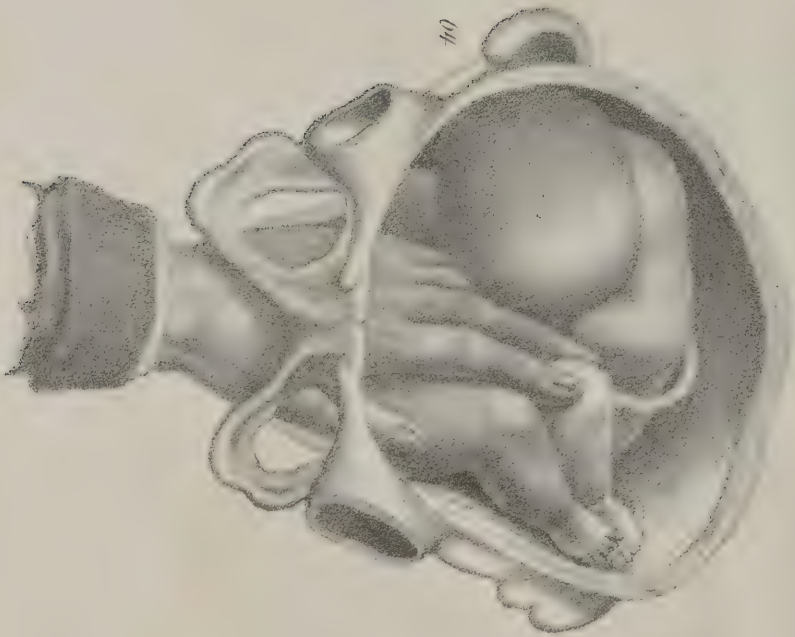
Have every thing in the proper position; place her on a bed or mattress, so that she will not sink into it. The hips should extend over the rail of the bed; each foot should be placed in the hands of assistants. Let them be seated with their backs to the patient, for women, if not accustomed to such thing, will be frightened if there is hemorrhage. Then each one takes a foot and grasps it, so as to hold it still. The practitioner is then seated between—his sleeves rolled up, his hands warm and lubricated with lard or sweet oil—another assistant holds the patient's

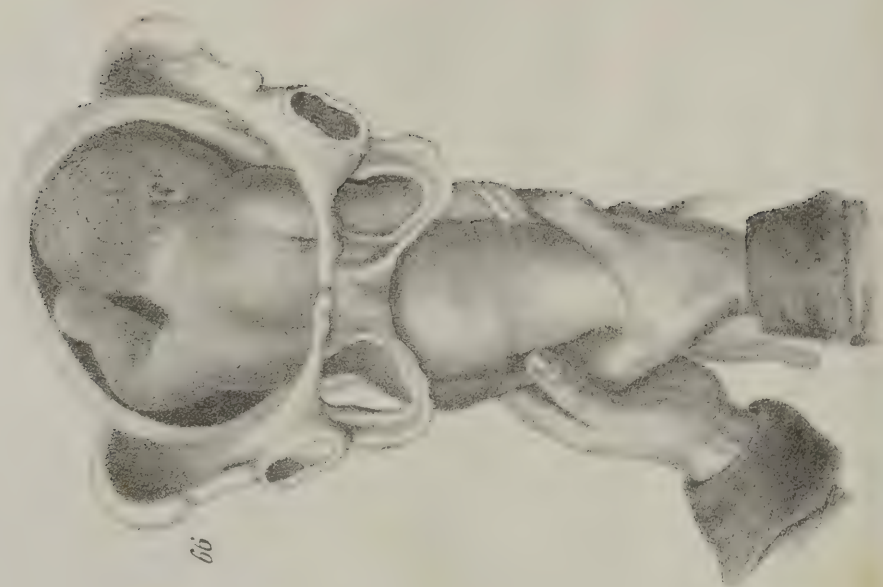
body. When the practitioner introduces his hand as far as he can, searches for the feet, turns his hand around till he finds them, and draws them down, and so shifts the child. If you can get hold of one, do not wait till you will get hold of the other—one will answer. If, however, a pain comes on, let the hand come away quickly, for the knuckles present a rough surface; another reason for withdrawal is, that the powerful contractions make the hand very sore. The moment the pain ceases, go to work again, and complete it if you can. Now, in this case, with this presentation, you would introduce that hand the palm of which would look towards the face of the child, put it in behind the child—as you feel, turning takes place in that way, so that you have nothing more than a breech presentation. Turn, so that the vertex will rotate under the arch of the pubis.

You should understand what presentation you have, so that you can introduce the proper hand, for that hand that brings the palm toward the face of the child must be used. Your effort in passing your hand up is to get hold of the feet, so as to turn the child, and it makes not much difference how you take hold; any way to get hold of the feet. You may have some difficulty in distinguishing a shoulder presentation from a knee presentation; you may distinguish by feeling along the limb, till you come to the body of the child; or, if you get hold of the knee, it will feel like a bag of intestines. Having ascertained that it is a shoulder, the next question is, what is the position of the head? at the right side, or where? This will be ascertained by feeling the arm. If you find, by putting the hand behind the child, the soft walls, then you will know that the face is looking back.

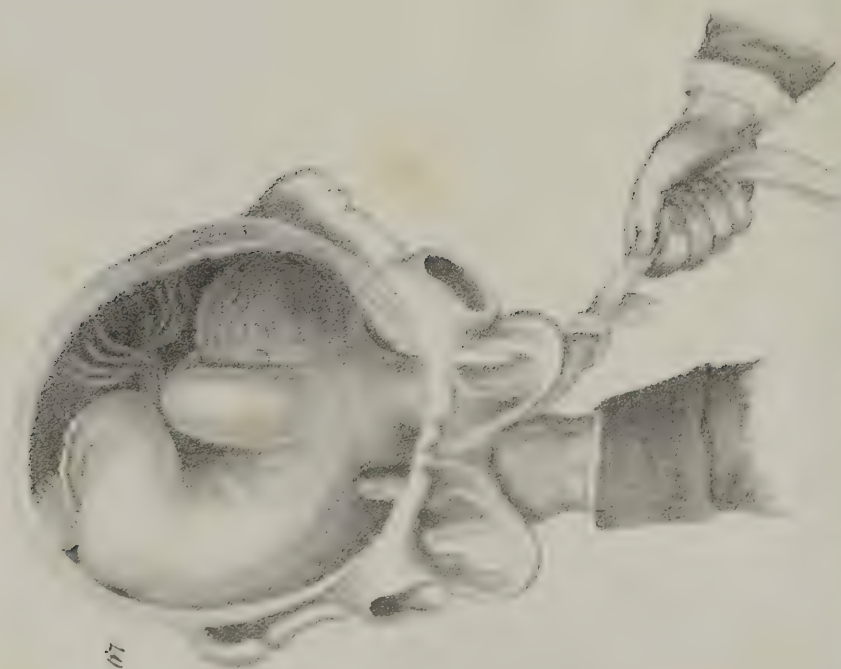
The next thing is to decide in which side of the pelvis the head is; whether to the right or to the left. Then feel for the clavicle: the top of the shoulder; is it to the left or the right? You should know precisely the position of the child, and then you will know which hand to introduce. The most common course of preternatural labor is shoulder presentation.

Presentation of the Arm. This is a presentation, that, from the earliest periods, has been alarming, and has been pronounced

1st position of the right shoulder.*2^d position of the right shoulder.*

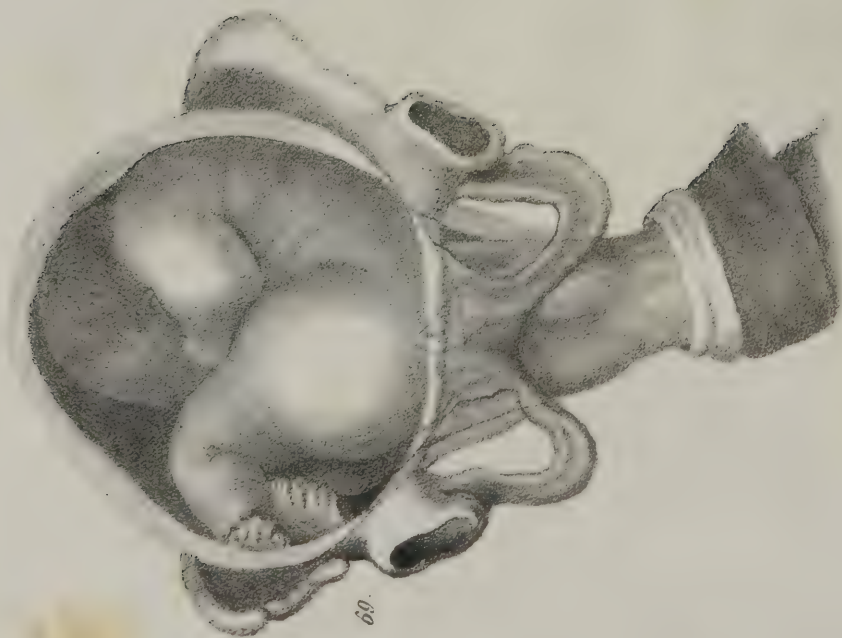


Same position, the arm out



1st position of the right shoulder, the arm out





1st position of the right hip



2d position of the right hip

an impracticable one. Amputation of the arm was practiced among the ancients, but, generally, with but little advantage to the mother, while it was destruction to the child. At the present day, there is more hope entertained by the profession, and successful deliveries are conducted even when the entire arm is protruded. *Fig. 67* represents the first position of the right shoulder, with the arm protruded, upon the management of which Prof. MAYGRIER, of Paris, gives the following directions: "After determining the exact situation of the child, which is in the first position, by inspecting the presenting arm, a fillet is applied to the latter, which is held by an assistant, standing on the right of the accoucheur. The left hand is then introduced, in a state of supination, to the axilla of the child, and the trunk is pushed back; the same hand then proceeds along the anterior surface to the feet, which are seized and brought towards the inner part of the right iliac fossa, to terminate as in the second position of the feet. When this maneuver is properly performed, the arm re-enters, and even entirely disappears. But when the child is about to be delivered, the accoucheur should take hold of the fillet upon the arm, and act upon this also, while the trunk is passing outward." This maneuver is illustrated by *Figs. 66 and 67*.

Presentation of the Hip and Loin. These presentations, as all other trunk presentations, are not regular, but vary so as to make it difficult to describe them definitely. In the maneuver, however, they are much the same: *Plates XXX. and XXXI.* represent this very well. The object is to bring down the feet, and, for this purpose, the hand is passed up under the child, with the palm next to it, and the feet and knees are taken hold of, and the body of the child turned upon itself, while the feet are brought down also, and the delivery effected thence, as directed in feet presentation.

Sometimes, as in *Fig. 70*, the hand is best introduced in the pronate way, and the feet and knees taken hold of, with less effort at rotation of the child.

Presentation of the Belly and Breast. It happens seldom that presentations of this kind occur, but still they do occur, and the

student must be prepared to attend to them. They are often difficult to manage; but less so than shoulder presentation. The danger is to the child. The unnatural contortion is liable to result in injury to the spine.

The general principles in the maneuver are the same as in the hip and loin presentation: the feet must be brought down, by turning over the child upon itself. The hand is passed up—the feet are taken hold of and brought down, but with great caution, for it is very easy to do mischief in this case. If a proper effort be made, the body of the child may be glided forward, by inserting several of the fingers, over the protuberance of the hip, or by grasping the thigh; and then the feet may be brought down, and the delivery thus effected.

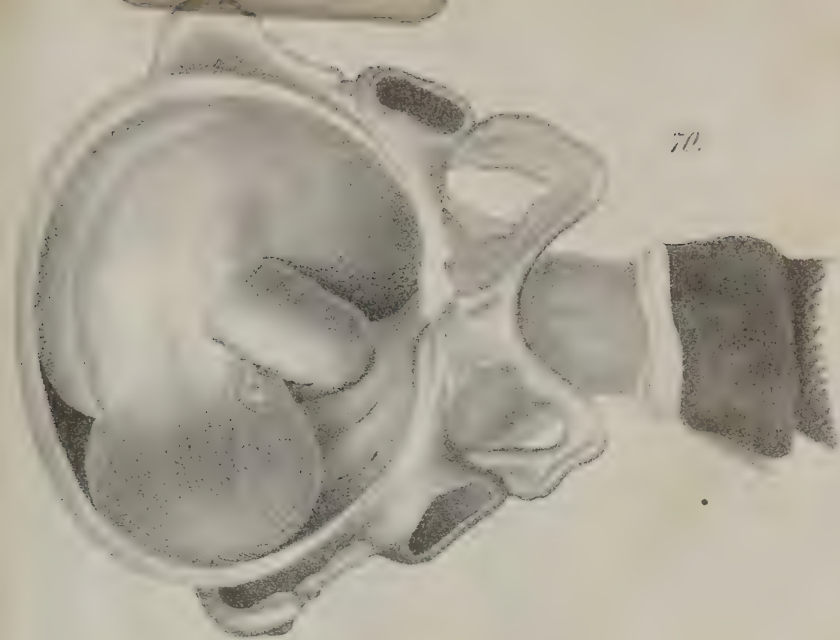
Sometimes only one foot can be reached. In this case, we must avail ourselves of this purchase, and apply a fillet upon it, so as to keep possession thereof while an effort is then made to get hold of the other.

Some practitioners have advised, in presentations of the chest, as the head is nearer the passage than the feet, to follow the plan of bringing down the head, instead of the feet. This can be done pretty easily, if we get to the case early—before the membranes are ruptured—for, as the uterus has not yet much contracted, we may bring the head of the child over the brim of the pelvis, and then the contractions will bring it forward in the passage. But, in cases of inertia of the uterus, hemorrhage, or convulsions, we may not so readily succeed by this method. In such cases, we had best seize the feet at once, if possible, and bring them down, speedily but gently, and effect the delivery.

Presentation of the Back. This presentation may be confounded, on first examination, with the vertex presentation, for the impacted state of the body of the child will cause the presenting part to be hard, like the surface of the head. But, by a careful feeling, we may discover the processes of the spine, or the ribs, and our case may thus be known. The body of the child lies across the passage, from side to side.

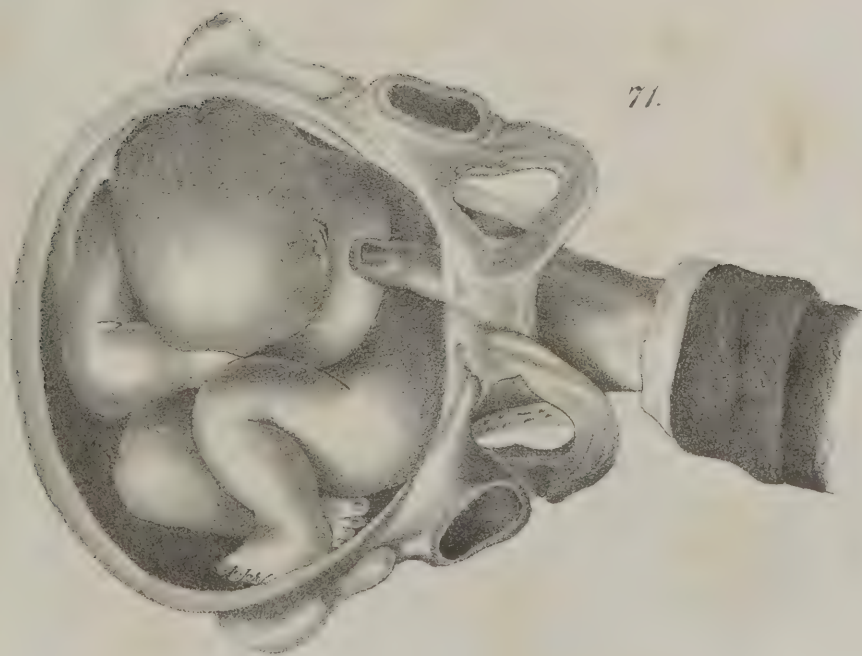
Second Position of the left Hand

70.



First Position of the left Hand

71.

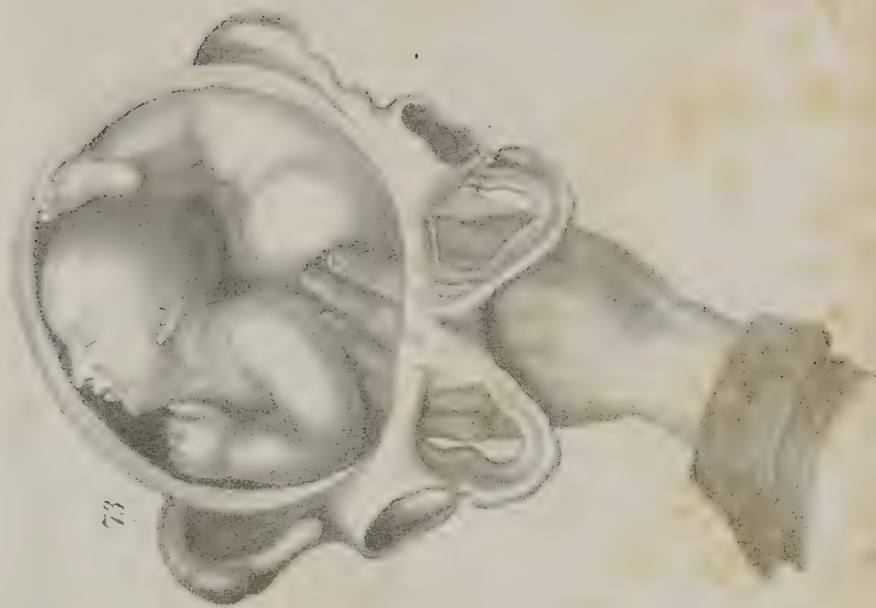


2^d position of the Thorax



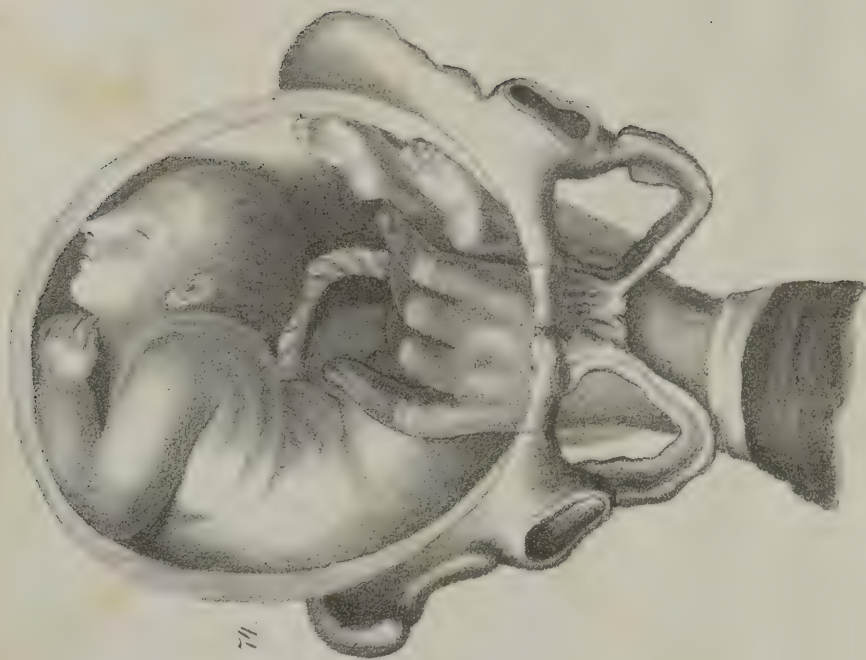
72

1st position of the Thorax



73





2^d position of the belly



1st position of the belly

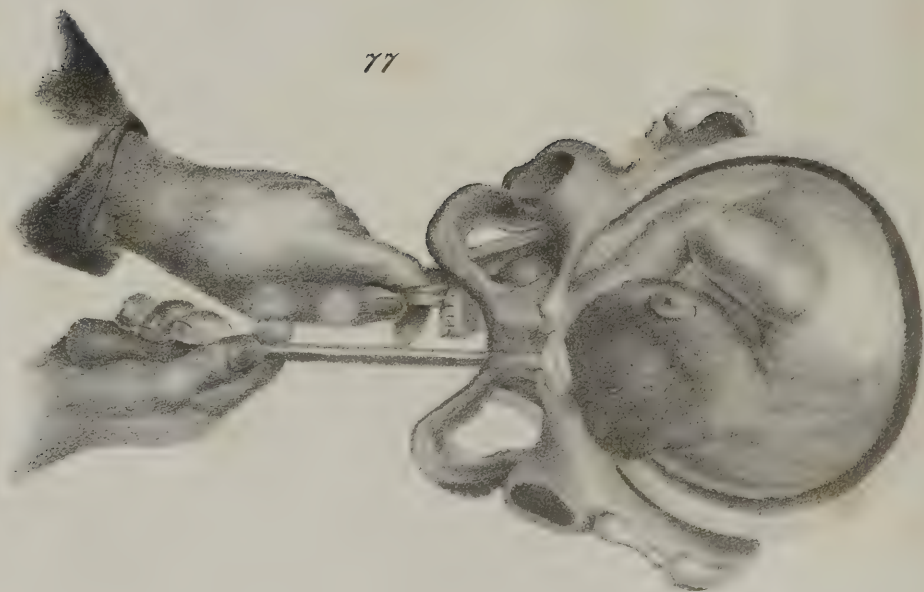
76

Introduction of the hand to the feet.



77

Application of the repousseur.



Our procedure will be to pass up the hand, in a supine state, under the child, and turning this upon itself so as to bring the spine toward the pubis, the hand can then be put up past the belly of the child, and the knees are seized, and the legs are thus brought downward, and the labor conducted as in feet presentations.

Presentation of the side of the Head. Although the presentation of the head forms the example of the natural way, it nevertheless happens, sometimes, that difficulties attend, which place the case in the preternatural class. I have several times had cases of this character that were very tedious; and, my friend, Prof. Kost, has related a case, that occurred in a robust woman, which required all his art to conduct it to a successful termination. The presentation was one of the side of the head, when the vertex lay high upon the brim of the pelvis; and the power of the uterus was such, that there was no chance for retraction. The pains were almost constant, and the case, hence, difficult. When there are intervals between the pains, that will admit of maneuver, we may generally effect the shifting of the presentation. But in the case just cited, the constantly contracted state of the uterus, and that with a power above the resistance of an ordinary man, we find ourselves often baffled. Lobelia was administered, in this case, in full doses for hours, without producing any relaxation. But a combination of macrotin and lobelia did, at last, have the effect to suspend the continued contraction, and, at the second relaxation, the head was successfully righted, and the birth effected in a few minutes.

The object in all presentations of the head is, to bring it into the natural position, and this, it would seem, ought to be effected without so much trouble: yet, the fact that many practitioners have resorted to the method of turning, in this presentation, shows, somewhat, the character of the case. The *Figures* 76 and 77 illustrate the process of turning, in this case. The first, by the passage of the hand up to the upper part of the uterus, for the seizure of the feet, and the other by the use of the repressor, or *repoussoir*, and fillet.

LECTURE XXV.

HEMORRHAGE IN PRETERNATURAL LABOR.

This may require your immediate attention and assistance. You may understand, as I have frequently repeated, as long as the uterus remains distended the hemorrhage will continue; but when the contractions come on, the hemorrhage will invariably cease. Then, you must understand, also, that whenever hemorrhage is present before delivery, you must deliver as soon as possible; and, if you are satisfied, that the woman would die before delivery would take place by the natural efforts, introduce your hand, turn, and deliver. You may, however, do considerable towards stopping the hemorrhage, by the use of means before described—cold applications over the uterus and abdomen, and internal remedies—but it is not probable that you will succeed, where there is severe hemorrhage. Concealed hemorrhage may take place, and, not unfrequently, before delivery. You remember that I told you how to detect this; if there is no outward show, she may be bleeding to death internally: the placenta being detached in the center, and still connected with the uterus around the edge. The cavity, behind the placenta, being from five to seven inches in diameter. If she is faint, pulse fluttering, turning pale, and you find, on one side, a large protuberance; it is not the child's head, but a globe of blood; the child's head is down in the pelvis: you must turn and deliver, as in the other cases.

Another cause of preternatural labor is, *Placenta prævia*. That is, the placenta attached over the mouth of the uterus. In

this there is no great danger to the mother, if every thing is in order. Never attempt to turn, until there is sufficient dilatation. If you cannot introduce your hand easily, don't try, or you will endanger the mother. But if you can introduce your hand, bring down the feet, and deliver as soon as possible.

POST PARTURIENT HEMORRHAGE.

This takes place after the delivery of the child, and before the placenta comes away. It is generally accompanied by hour-glass contractions. In this case, hemorrhage will generally go on—the uterus contract on the placenta—the fundus being relaxed. Introduce your hand, detach the placenta, quickly as possible, without doing violence to the parts, and the contractions will generally come on; if not, use the means which I have before recommended. But, in detaching the placenta, you must not tear the internal surface of the uterus, however strongly it may be attached. If you cannot succeed in detaching it, let it alone. She had better die by nature than by your hands. If hemorrhage follow the afterbirth, after the uterus being once contracted, you ought to apply a bandage over the region of the uterus. This will prevent the relaxation; and, with your internal remedies, will succeed.

You should never leave a patient, till several hours after delivery; especially when there is any tendency to hemorrhage, and not then if there seems to be danger, unless you leave her in the charge of some one on whom you can rely with confidence.

CONVULSIONS.

The next cause of preturnatural labor that we shall notice is, that of convulsions occurring during labor. You must understand that, were the subject not pregnant, she would not have convulsions, and the way to relieve her from this condition is to deliver immediately, she will have to be delivered, or die; the cause is her present condition, and she must be delivered or the effect will not be obviated. Then, of course, you must proceed

to deliver, as directed before. But understand this, also, you should never attempt to deliver until the os uteri is dilated: though, if not delivered, she will certainly die from the convulsions, unless you relieve her, and you can only do this by delivery. Still, you must not force the uterus, for, in doing this, you would kill her; and yet, it not unfrequently happens, that this rigidity occurs at the time the convulsions come on—then you must do something else. If she dies before the parts are dilated, it is not your fault. We are directed, in the books, to bleed, apply leeches, cups; blisters to the lower extremities, and the head.

Well, some of these things may possibly give relief, but we fear they will do more harm than good. The history of many who have been bled under such circumstances, shows a sad account—enough to convince any man of common sense, that, left to nature, more would recover than under such treatment; while, under proper treatment, few need die. I have had but few cases of the kind, it is true, but I had one last winter, from which I was dismissed, because I refused to bleed her, and another was sent for, who as obstinately refused to bleed her as I had done, and she got well. I think, however, if I had continued, she would likewise have recovered. It was determined that she should be bled, and I would not do it. The course I have always adopted is, to produce a thorough relaxation, and the best means I have any knowledge of is some of the preparations of lobelia—generally the compound tincture of lobelia. Give that, if she can swallow it, freely, and you need not take the trouble to measure it, particularly. Under ordinary circumstances it should be measured, but in this case, put it down by the table-spoonful—it will do no harm; but it is not every patient that can swallow it. However, if her teeth are set, open them, and put it in the mouth. If it reaches the glottis, even though she may be far gone, it will restore her. You need not stop here—use the same article as an enema. Put it into water, hot enough to make it blood warm, use several ounces at a time. I have used thus much before it would produce any effect. It will not generally be more than ten minutes before

the patient comes out of the convulsions. It will, also, produce active purging, and remove a large amount of accumulations from the rectum of such patients as are predisposed to the disease. Continued injections, with this powerful anti-spasmodic, will give relief.

I have rarely administered it the second time; but the convulsions may come on a second or third time. I had one case, where this agent had its proper effect, and the convulsions returned again, after using it thoroughly, and besides warm bathing and external applications.

The patient had been costive for several weeks, and she was not delivered, nor had she advanced so far that she could be delivered. After using this means, I directed croton oil, and gave doses until we had given eight or ten drops, and as soon as that operated she was relieved. It did not produce much prostration, but a considerable irritation, and the patient recovered, as the labor pains came on, and she was delivered in due time. Rarely does the child live; whether it is from the spasmodic action of the uterus, or from constitutional effect, through the mother, we cannot tell. You may apply this externally; wet a cloth in a hot preparation of the tincture of lobelia, over the abdomen, stomach, and pubic region; this produces prostration, for the time being, but it will not continue as long as blood-letting; she will soon recover again. If there is rigidity of the os uteri, apply the extract of belladonna, in the manner previously directed. It has the specific effect of dilating the os uteri, perhaps, by blunting the sensibilities of the parts. Whatever be the principle of the action, the fact is the same. I have used it with the best effect. After having allayed the spasms, you may proceed to deliver, but you may not be able to accomplish this, even though the os uteri is dilated, owing to the rigidity of the soft parts. But, as soon as you have succeeded in producing a sufficient degree of relaxation, turn and deliver. Do not wait for labor pains to come on, because convulsions will also come with them. The pains caused the convulsions in the first place; because her nervous system was not strong enough to resist them.

LECTURE XXVI.

TENDENCY TO APOPLEXY.

In cases where convulsions in parturition are of long continuation, and inordinarily severe, there is always more or less danger of apoplexy; and you should ever be prepared to meet such cases, and should also let those about you be prepared to expect the worst. Especially is this necessary, if the patient be of an apoplectic habit. Apoplexy may be the result, even before you have brought her out of convulsions. Even if the patient is pale, and not of what is called an apoplectic habit, still she is liable to apoplexy of the worst and most alarming character.

There are two causes of apoplexy—the most dreadful condition is the anemial. You may bleed a patient till she dies of apoplexy; the last drops of blood being found in a congested state, about the brain. Patients who die of apoplexy, in hospitals, where they are worked hard and poorly fed, die of anemia, by the low condition of the blood. It is not always the person who has the most blood, that is most liable to be a victim of apoplexy, though the rule in the old school practice is, to bleed for both apoplexy and convulsions, and has led to fatal results.

In convulsions, keep all quiet, there should be no noise about her, and especially must you avoid saying any thing about her condition, in her presence, till she has recovered; and better not then, for, if she is confined again, the very dread of convulsions will bring them on; such is the nature of very nervous persons. If the convulsions return, give her some active tonic—also, give her nauseating doses of lobelia, this may be combined with

scutellaria and cypripedium. I have used cubeb with much success.

If the child is living, pay the same attentions to it, and also to the mother, as in other cases. It is only required to keep her still and quiet.

Cramps may be the cause of preternatural labor, and will require your immediate attention. Just as the head passes through the superior strait, it may press upon the point where the anterior sacral nerves are transmitted, so as to produce pains and severe cramps. All may seem to be going on well, when, all at once, she will scream right out that she is cramping; she cannot resist screaming. This arrests the labor pains, and the labor ceases immediately. Every pain that comes on throws her into cramp, and you may labor for hours without relieving her. You have not time for thinking what to do. Make an examination instantly, and ascertain, at once, the position of the child. Introduce your hand, and feel if the head presses down on that point, if the head does not fill the whole excavation, try and raise the head a little. However, you cannot keep it there, for the moment it moves a little, the head comes down again. If you cannot move it, try something else. If you cannot do any thing else, introduce your instruments and take the child away.

If you fail in this, you must just push the head back and turn; you can usually manage to turn, so that it will not come in contact with the tender point—then pull it down far enough to introduce the forceps. If you cannot seize the head, at first, with the forceps, it is better to introduce the hand and turn; but you may usually succeed.

PROLAPSUS OF THE CHORD.

This is another cause of preternatural labor; it may be a vertex presentation; the chord may fall down, when the head fills the pelvic cavity; if it is allowed to remain so, the child will certainly die. If it becomes fixed, there is no other means of saving the child, but to either introduce the forceps, and deliver

immediately, or push back the head and turn. An instrument for raising the chord, you can always make on the occasion. Take two pieces of whalebone, or, if you cannot get that, take two sticks—hickory is best—after having made the sticks perfectly smooth, cut notches at one end of each. The sticks should be at least eight inches long, and are best half an inch wide, and an eighth of an inch thick. Now, by passing up the truncated or notched end, between the head and the pelvic walls, you may push the chord back beyond the child. But you may fail in this, and if you do, there is no other way of saving the child, but by delivering immediately.

F A I N T I N G .

Syncope may be a cause of preternatural labor. Some women are always disposed to faint on every little occasion, and, in labor, they will faint every pain that comes on; if this be the case, deliver immediately, by turning.

S T R A N G U L A T E D H E R N I A .

This may be the cause of preternatural labor. If there is hernia, and you know it before-hand, you must keep it reduced; but it may be too far gone, and, if you wait, it may be impossible for you to relieve her from strangulation, and she will die. There may be no danger from the parturient condition; yet she may die from the effects of strangulated hernia, from the fact, that it has gone on too far; hence, if you discover hernia, you should not wait a moment, about your efforts to reduce it.

L A C E R A T I O N O F T H E W O M B .

This may require your attention. The contractions of the uterus may be so powerful as to result in laceration; in which case the child may escape into the abdomen, and render it necessary to perform the Cesarean operation, and thus, will almost certainly kill the mother. If the presenting part has been crowded down into the pelvis, and after that, you discover that it recedes, not-

withstanding the pains continue; you may suspect that the uterus has given way; deliver as soon as possible; take, with the forceps, if you can reach it. The body may be delivered, and the head remain. When the head is down so as to get hold of it, with the forceps, use them, instead of turning.

We are told of cases in the books, where the child escaped into the abdomen, though I have never seen a case of the kind. MEIGS tells us of one case—I think he has had more than one—where the child had escaped into the abdomen, he introduced his hand through the opening in the uterus, seized it, and brought it back. But my advice is, if the child is out of the uterus, let it alone, and immediately resort to the Cesarean operation; for after the uterus has once contracted, which it does almost instantly on the escape of the child, it is more dangerous to attempt to recover it through the womb, than is Cesarean section. And I should think that after the pains come on, there is not, generally any danger of fatal hemorrhage in such a case.

LECTURE XXVII.

ANEMIA.

In enumerating the causes of preternatural labor, we find anemia a prolific cause.

What we mean by anemia is a low state of the blood, not containing sufficient stimulating properties—not a sufficient quantity of the red globules, and too much serum. In the healthy condition, the solid parts of the blood are about two hundred and ten, to seven hundred and ninety fluid. Now, whatever cause may disturb these definite proportions, destroying the equilibrium between them, will cause derangement in the system; and just so far as this equilibrium is destroyed, is the patient depleted, and when you withdraw this blood from the patient by bleeding, this anemia is produced, for a longer or a shorter period. The normal caliber of the veins must ever be sustained. Absorption, therefore, will go on much more rapidly in cases of the loss of blood, and, hence, a superabundance of serum is soon furnished, while the solid part, or fibrin, not being supplied, must remain deficient. The equilibrium is destroyed, and anemia is the deplorable consequence. Owing to the rapid absorption of serum from the fluids, in the stomach, many impurities are also taken up, and conveyed into the circulation, creating a still more deranged state of the blood. It has also been recommended to bleed in dropsy. Bleeding diminishes the fluids, and places the patient in a condition most favorable to dropsy. Dropsy is occasioned by the superabundance of serum over the solid parts of the blood. If we bleed a patient, we take just as much of the

fibrin of the blood, as we take of the serum. This abstraction of blood increases the activity of the absorbents, the patient becomes extremely thirsty, drinks a great deal of water, and this, with other fluids, passes rapidly into the circulation. The blood then has too little of its natural stimulus, the brain ceases to impart the proper nervous energy to the body; the circulation becomes weak; the fluids, which ought to pass off, are retained, poisoning every tissue of the body; hence, the patient becomes anæmic. You will see this matter philosophically treated by MEIGS. He tells you how bleeding contributes to anemia, and consequent weakness of the system; and yet, in the face of his philosophy in reference to dropsy and anemia, he recommends to bleed, before confinement, as a preventive to convulsions. Dropsy may follow on the anemia, and you may be called too late. You must assist and deliver as soon as possible. If the pains are not strong enough, deliver with the forceps. But if you are called in time, to a patient with dropsy, treat her for it, as in any other case; give tonics, astringents, diuretics, and healthy food, instead of weakening her by bleeding. No one can gain strength, except by nutrition. There may be a healthy quantity of blood, but being unequally distributed in the system, and you apparently relieve her by equalizing the circulation, but if the patient is really depleted, there is no way of strengthening her but by nutrition. You may give temporary relief by stimulating, but they soon fall just as far below. But the patient is really strengthened by nutritious food. Whatever you aim at in this case, must be done by promoting the strength and activity; then, by all means, do not take away the natural stimulus of the stomach and vital apparatus. You may have to remove impurities from the system—the efete matter from the stomach, by using emetics and cathartics, but when this is done, supply it with cold water and proper food. I believe in invigorating the system by direct absorption. The preparations of iron are highly beneficial to the blood. Experiments have proved that the iron is rapidly taken into the blood, when administered in the form of oxyde internally. After the individual has taken a portion of this

metal, the blood is found by analysis to contain a much larger quantity than it did previously. You may also use many of our bitter herbs. These seem to act directly upon the indigestive process.

Why this is the case, we cannot tell; we only know that the patients improve in their use. Those that attempt to tell why, must reason more clearly than they ever have yet.

EXHAUSTION.

In exhaustion we have another cause of preternatural labor. You should be able to distinguish exhaustion from a simple cessation of the labor pains, for which it is generally necessary to stimulate. If you were to follow the course of treatment recommended for restoring the labor pains, you would certainly destroy your patient. Hence, you must be able to distinguish between exhaustion and cessation. In exhaustion, the pulse rises to from a hundred and twenty to a hundred and forty, but is very much reduced in quantity. The patient becomes thirsty; the mouth is dry, and the patient is constantly calling for water. When you discover these symptoms, you may suspicion exhaustion. Simultaneous with exhaustion, you will notice that the patient becomes very much discouraged, and gives up all hope—she can do nothing more, and has no disposition to do any thing more. When you have these signs—feeble pulse, dryness of the mouth, and loss of courage in the patient—you need not depend on stimulants—they will do no good. You must immediately interfere and deliver. Turn, or use the forceps, just as the case seems to indicate.

SMALL-POX.

Preternatural labor may be caused by small-pox.

From some reason not very well understood, those who are affected with small-pox, at any time from impregnation to the time of delivery, are much more liable to hemorrhage at the time of labor. The great danger in this case is from hemorrhage. Whenever an individual is affected with small-pox, and hemorrhage

sets in, it becomes necessary for the practitioner to interfere, and complete the labor as soon as possible.

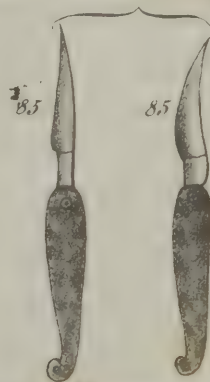
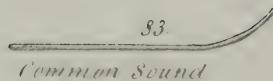
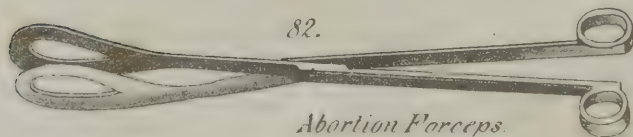
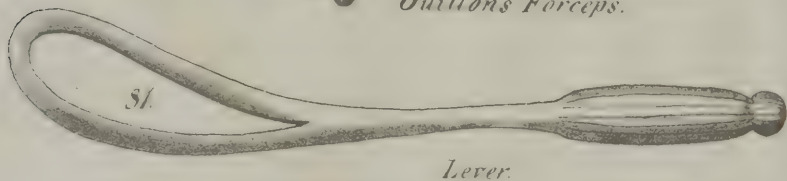
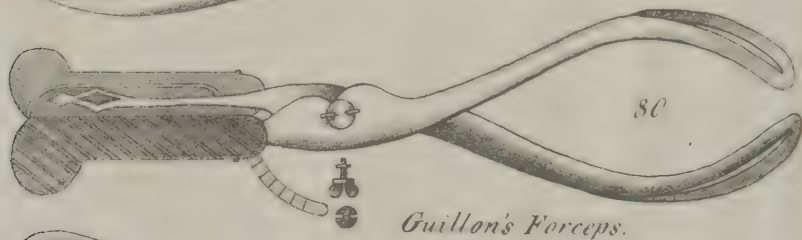
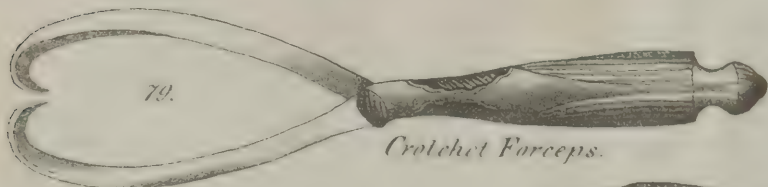
And here let me caution you against vaccinating a patient, during the stage of utero-gestation. Better risk the genuine small-pox than vaccination. An individual affected with vaccination—for it is a disease for the time—is very apt to abort. Therefore, never vaccinate a pregnant woman, however much she may be exposed to the small-pox. Severe and fatal hemorrhage has not unfrequently followed vaccination, and a great many more cases have proved fatal from this cause, than from genuine small-pox. The child is apt to be seriously affected. Children are frequently born completely covered over with small-pox; though, when this is the case, they are not apt to live long. Cases occasionally occur, however, where the child recovers. I have seen one such case myself. The mother was affected with small-pox at the time, but I did not notice much hemorrhage. The child soon became affected, but lived through it, and is now living. That was more than a year ago.

LECTURE XXVIII.

PLURALITY OF BIRTHS.

Although a larger number than one at a birth may take place in a natural way, yet this is not always the case. Twins may both present the vertex; but, most generally, one is vertex and the other breech. Still, whatever may be the condition of the presentation, when they do present, you cannot, often, tell that there are two. It may be decided by the rotation, but not certainly: you may ascertain by oscultation; and in this you may be pretty certain, but the best practitioners will, sometimes, be deceived. When the first is born, it rarely happens that the membranes are ruptured, so that the water escapes from both at the same time. There may be two placentas, or they may both be attached to one. The great danger in this case is hemorrhage, although the labor may go on well, if the proper time elapse, and no assistance be necessary. But hemorrhage may come on at any stage. When it occurs, hasten the labor.

There may be concealed hemorrhage going on, not externally. Watch the patient's countenance; if she grows pale and faint, pulse feeble, and an appearance of sinking, you may mistrust concealed hemorrhage, and you will proceed immediately to deliver. The reason why there is more danger in concealed hemorrhage is, that there is a larger surface of the uterus exposed, while it is thus distended. A small rupture will allow a large portion of blood to escape. But, although it is most likely to require your assistance, it is by no means certain that you are to interfere in all cases. You are only required to pay closer attention under such circumstances.



Symphysis knife

Bistouries.

D E F O R M E D P E L V I S .

In deformed pelvis we may often find cause for preternatural labor. It was mentioned before, that the pelvis may be deformed, and may yet have sufficient dimensions, if the presentation be right, for the labor to be completed without interference; whereas, there may be a presentation which would render delivery impossible. Take, for example, the long diameter of the one side, and the short diameter of the other; if it presents to the short diameter, the labor cannot be accomplished; but if, on the other hand, it presents to the long diameter, no difficulty will occur. If you have the presentation to the short diameter, you must turn. It is not probable that you could so change the position of the head, as to bring it in the right presentation; you would break the neck, either with the hand or the forceps, and you are not authorized to interfere in that way, but must turn. Where the vertex presents to the short side, while there is a long diameter, if you can bring the body out, so turn it as to bring the vertex to the right side.

Where one is too short, and the other is too long, as is apt to be the case in a deformed pelvis, the forceps will avail but little, if any. However, there is such a multiplicity of deformities that we cannot give any definite rules; you must exercise your judgment as to what is best to be done.

There may be cases where the forceps can be used; while, on the other hand, it may be necessary to turn the head clear around, which would break the child's neck: never turn the head more than one-fourth of a circle round. Any one may try to turn his own head further, and he will find it impossible; and a child cannot bear any more than you can.

U S E O F T H E F O R C E P S A N D O T H E R I N S T R U M E N T S .

I shall not follow the example of most teachers and writers in this branch of obstetrics. I deem it unnecessary to go into the history of these instruments, or the various improvements, from the middle of the eighteenth century to the present time.

I will simply say, here, that before the discovery of the forceps, all instruments were designed for the safety of the mother. The ancients had but little regard for the infant, and, consequently, all their efforts were directed to the safety of the mother. The forceps, for the safety of the infant, were discovered about the middle of the eighteenth century, by Dr. CHAMBERLAINE, and kept a profound secret for some time, but was finally made public. His forceps had only one curve. In 1750, SMELLEY, of London, and EVERET, of Paris, made a new curve.

In many cases where the child would otherwise have died, both mother and child have been saved, by the new curve.

By reference to the following figures, you can have a view of the appearance of some of the most useful forceps, and other instruments:

Figure 78. The common obstetrical Forceps;

79. Crotchet Forceps;

80. GULLON's Forceps;

81. Lever;

82. Abortion Forceps;

83. Common Sound;

84. Symphysis Knife;

85, 85. Bistouries;

86. Perforator;

87. Extractor;

88. New Extractor,

99. SMELLEY's Scissors;

90. Sound;

91. GULLON's Porte-cordon.

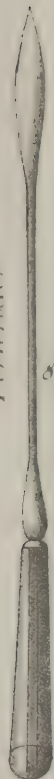
92. Repoussoir;

93. Porte-cordon of DUCAMP.

Forceps should be made of steel, and not of iron; for the former is lighter, and less liable to bend, or get out of shape. A well-made and good-proportioned pair of forceps, should be from seventeen to eighteen inches long. The joint should be about an inch from the center, nearer the handles, and the latter extremity should be curved, to give purchase to the grip.

Perforator

86



Extractor

87



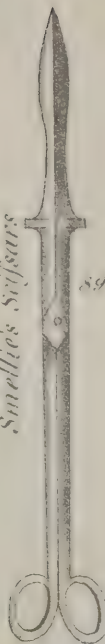
New Extractor

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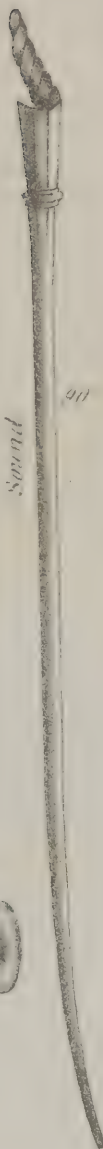
Smellie's Scissors

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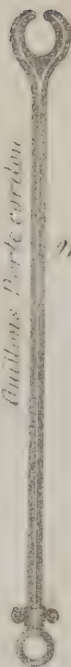
Sound

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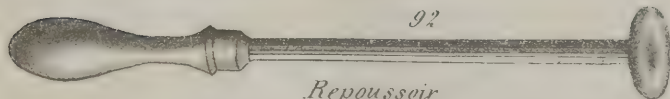
Bullock's Porte-cordon

91



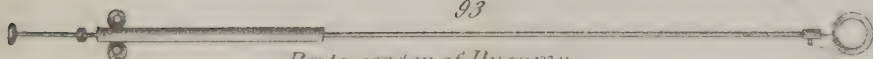
92

Repoussoir



93

Porte-cordon of Ducamp



The blades should be well-arched and well-rounded, and present an oval outline, with the larger part of the oval toward the top of the blade. Dr. GULLON's forceps are generally preferred, because they have neither pivot nor mortise, and are very convenient in their use.

The forceps are an invention more especially for the benefit of the child. The child might be destroyed, and taken away, by other instruments, but nothing else will take it away in safety; hence, they are called the child's instrument; while, at the same time, they are safer for the mother, than other instruments. Still, any case where the forceps are used, there is a liability to injure the parts; but there is no necessity for it, where the proper care is taken. The forceps should always be applied to the child's head, though some authors mention their having been used at the breech; but where you can use them in that case, you can use the hands. When I say they should be used only on the head, I do not mean that they should be used only in head presentations, for they can be applied to the head after the body is born, in breech presentations, as shown in *Figures* 98 and 99. It should be applied to the sides of the head, on the space between the apex and the chin, as shown in *Fig.* 96; but it may be applied otherwise.

You see, it fits the child's head exactly, when applied over the ears. It is recommended, by some, to apply it over the face, as shown in *Fig.* 97; but it rarely occurs, that it is necessary to do it. I can hardly conceive of a case where we cannot so manage as to get hold of the side of the head.

LECTURE XXIX.

APPLICATION OF THE FORCEPS.

Having determined to use the forceps, place the patient in the same position as for turning. Her limbs must be held by assistants, sitting in chairs, as before described. The practitioner has his sleeves rolled up, his hands warmed by dipping in warm water; the instruments should, also, be warmed by dipping in warm water, and lubricated with fresh butter, lard, or sweet oil. He seats himself between the assistants; the patient's thighs slightly flexed, and separated as widely as possible. Having ascertained the position of the head, and the condition of the parts, before he begins.

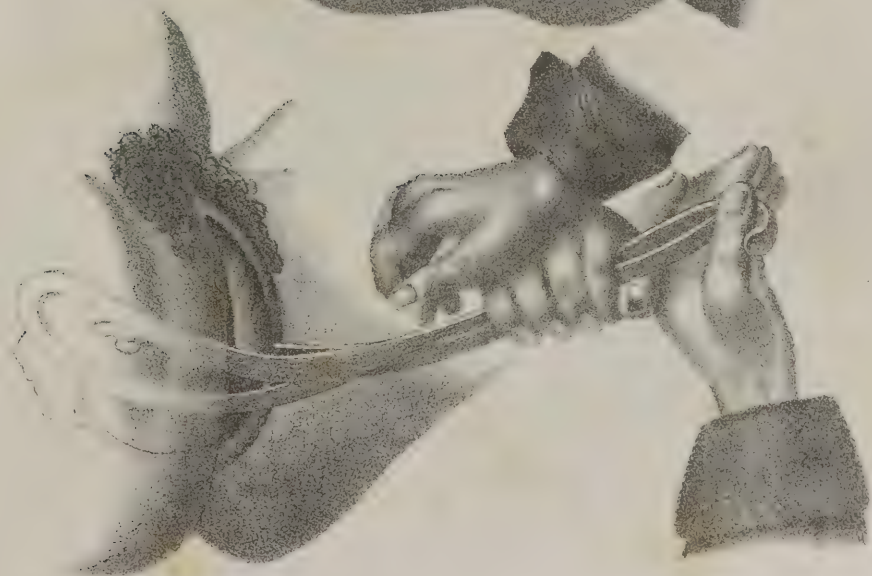
These conditions must be present: The head must have descended into the cavity below the superior strait; the os uteri must be dilated, to enable you to introduce the forceps with ease. The membranes must have been ruptured, and the water escaped. He may rupture the membranes the last thing before he begins his operation.

The blades are named right and left-hand blades, as, also, male and female blades. The left-hand blade is introduced from the left side—always introduced first, with the concave side of the blade looking upwards; (see *Fig. 94*;) then introduce the right hand, at the left side, along the left labia—it passes along till it comes in contact with the head, and notice whether the os uteri is included; for you must not seize that in the forceps. Introduce the blade along the surface of the hand till it comes to the head. The finger, meantime, directing its entrance within the os uteri, and, as it enters, gradually lower the blade—then an



94.

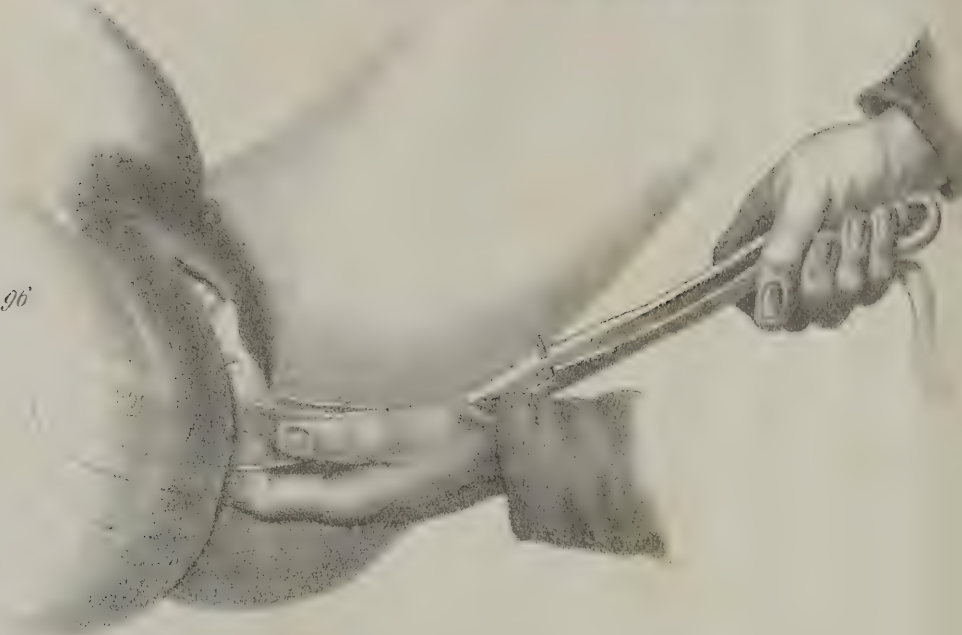
*Application
of the male blade.*



95.

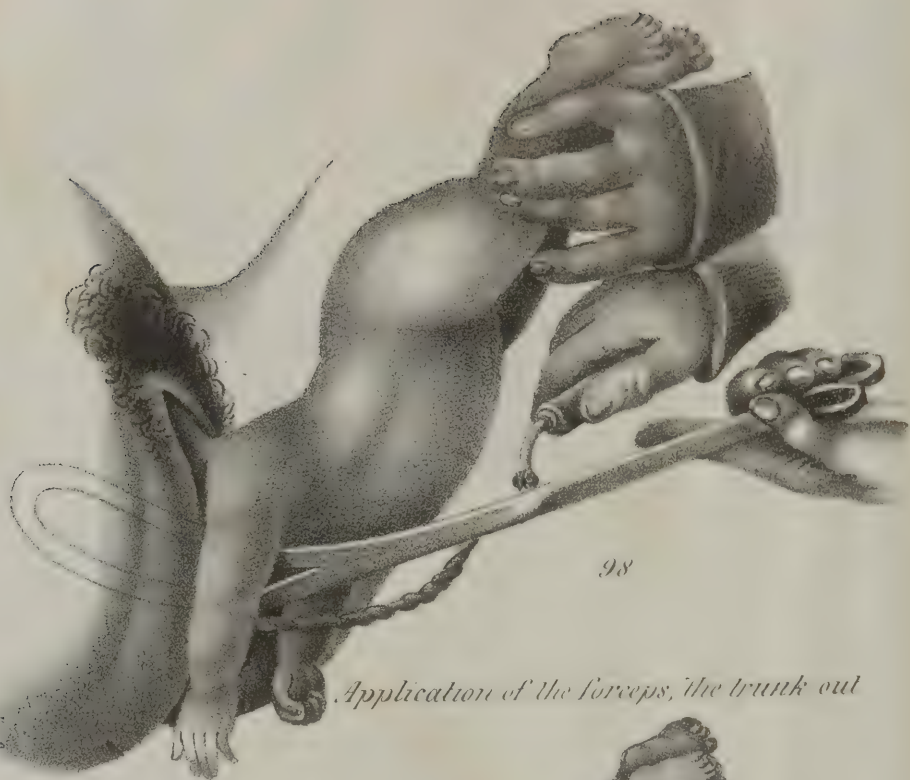
Forceps applied.

96



97





Application of the forceps, the trunk out



Delivery of the head with the forceps

assistant holds it ; (see *Fig. 95*.) Let this blade go down, bring it out, at the same time, on a line with the axis of the pelvis.

After having introduced the blades, it will not do to lock them by force, for they are not yet properly adjusted on the head ; move them about till they lock easily. Though, if the object is to compress the child's head, as it may be done, you may press them together. Some say, fasten them with a ribbon, or some kind of a string, but I do not believe in that plan, for it may be necessary to let go very quickly. Make a gentle lever-like motion, and, at the same time, raise up. If the head is high up on the superior strait, begin your labor there. Keep on a line with the different parts of the pelvis ; keep your right hand hold of the forceps, and lift at the child to see that the blade does not slip over the lip of the uterus ; keep your left hand here ; do not pull after the head is out. As soon as the forceps are adjusted, before you lock them, introduce the left hand, and feel if the soft parts are free, for they are very liable to be pinched ; then, after having pulled a little you may know, if it hurts her, you have got some of the parts of the mother in the forceps. Take them off, and try again—continue to try until you are certain you have got nothing but the child's head.

When using the forceps in breech presentations, the head must be below the superior strait, unless there is deformity. You must raise the child's body high up—in any case of this kind, the chin must be born first, and the vertex last. (See *Figs. 98 and 99*.) All the difference in this case and head presentations, in the application of the forceps, is, that forceps lock from the chin to the apex, and the body, being raised, it brings out the chin, mouth, nose, and forehead first, and the apex out last. Now, take a case just the reverse—the face in front ; now, the child's body needs to be thrown back, as far as may be, and the forceps are introduced in the same manner, from the chin to apex ; push down the forceps upon the perineum, taking care to do no injury. The chin passes out first, and the apex last, as in the other case.

It requires some little address and skill to use instruments properly ; and when you are going to use them, be careful not to

jingling them about the patient's ears much. The very idea of using instruments is calculated to shock the patient. It conveys to her the idea of injury. However, if you have a very handsome set of instruments, you need not mind showing them to the bystanders—it is a recommendation to you. But you must let her know that you are going to use instruments. In introducing them, you should be careful about using force; if there is room they will enter, and if they come into contact with obstructions, you may know they have not gone in right.

The lever is used, generally, for locked head, where two opposite points of the head come in contact with two opposite points of the pelvis, where there is still room enough when the head is in its proper position. The short diameter of the pelvis has met with the long diameter of the head. Under these circumstances, you can introduce the hand, very easily, at the side of the head.

There may be no pains, and the head low down, so as to render it impracticable for the labor to be completed; if so, apply the forceps.

It may be, that the patient is exhausted, so that she cannot use sufficient vital force to bear down—then, also, you have a case for the forceps.

But it may be, that there is an impacted head where the head touches at every point, too large to pass. The only chance is to save the mother, and kill the child; or, resort to the Cesarean operation, in which there is a chance to save both. But I would not risk the operation, even if she were exhausted and sinking.

However, on the other hand, she may choose to risk the operation; the husband and friends may prefer to run the risk of the operation to killing the child—then perform it.

LECTURE XXX.

CESAREAN OPERATION.

I had commenced saying something of the Cesarean operation. Whenever there is an impacted head, so large that it is impossible for it to pass the pelvis, there is no other way of saving your patient without injury, but to destroy the child, whether dead or living, and no way of saving both, but by an operation through the abdomen. However, symphyseotomy, or a separation of the symphysis pubis has been resorted to. If you find that, simply, an enlargement is required, you may resort to this operation. It is a very severe one, and there is great danger of injuring the urethra; but, admitting, as some contend, that there is no danger in it, it is still a doubtful plan, if it requires a great enlargement. Then, the question is between the probable death of both in the Cesarean operation, or the certain death of the child and saving of the mother. If they decide to save the life of the mother, at all events, the question is, shall we wait till the child is dead? If the child is dead you need not wait at all, and, if she can endure till the child dies, wait, but if she cannot, proceed immediately. To know whether the child is dead or not, you may use the stethoscope. If you can hear the heart of the child, you may know that it is living. If you can reach the chord, and find that the placental circulation is still going on, you may be certain that the child is still alive; and if it does not pulsate, you may know that the child is dead. The nature of the case may, sometimes, demand an immediate operation, whether the child is dead or not.

Sinking of the patient, with other signs of exhaustion—pulse

feeble and increasing to one hundred and thirty; thirst, and sense of suffocation, are urgent symptoms. When you have these symptoms, always decide quickly, one way or the other; but, always, before operating, inform the patient. Never perform the Cesarean operation unless it is her desire—no difference who else says so. As far as the destroying the child is concerned, it is well enough not to let her know it; and if she even resist, you are not to sacrifice her life to save the child's.

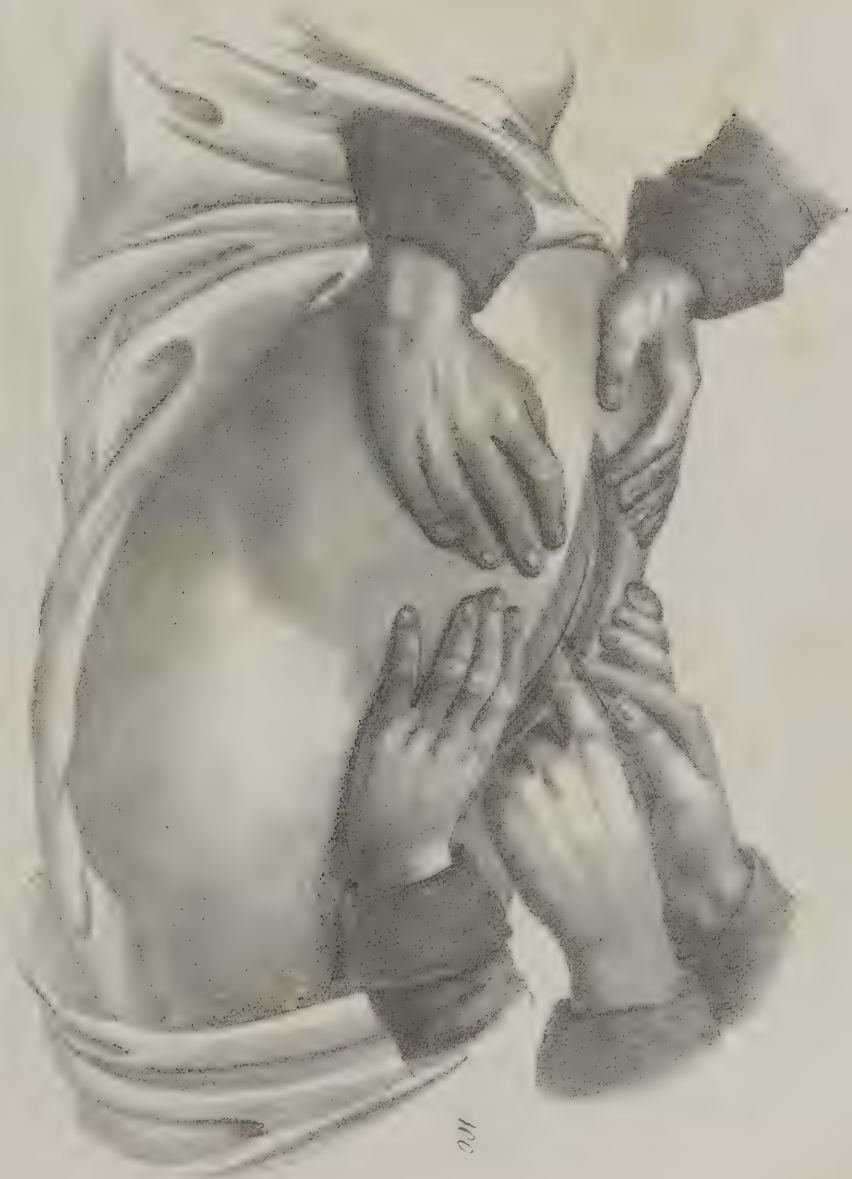
Inform them of the danger, but don't take the responsibility upon yourself; if you do, you are liable to censure: have counsel. As soon as you find it necessary to operate, dispatch a messenger for the nearest physician—but the doctor may not be at home—arrange it so that another messenger shall return to inform you of the fact, while the first goes on after another physician.

Notify the physician by the message, that it is necessary for him to come immediately. But if you find that the mother could not live till the counsel reaches, don't wait, but proceed immediately to operate—you have divided the responsibility.

I have done so myself, and when the physician came he said it was done right, even though he might have thought he could have done better.

Any honorable man will acquit you; because you sent for him, and tried to get him in time.

We come next to speak of the operation. The patient is placed in a convenient position for the operation. The best way is to have a mattress for her to be placed upon. Place her on her back, with the head a little elevated. The surgeon should not commence without assistants. Be sure to have those upon whose courage you can rely. It is not very profitable to have any females in attendance, unless they are accustomed to such things. All the instruments necessary are a scalpel and forceps. The incision is made just below the umbilicus—you can know something of the size of the opening. Be sure to make the incision large enough at first, so that the child can come out easily. It would be an awkward predicament to have to stop

Cæsarian operation. Process of the Incision

No



and cut further, after having attempted to take out the child. Make the incision from the umbilicus to the arch of the pubis—be very careful not to cut the bladder. This rises up above the arch of the pubis, gradually, when distended. Cut through into the cavity of the abdomen, introduce the director, and then cut with the probe-pointed bistoury or scalpel, running along in the groove, you will cut the walls of the abdomen in an outward direction. But little blood will escape.

As soon as the integuments are divided, some portions of the intestines may protrude through the wound; these must immediately be carefully replaced, since, if injured, dangerous symptoms may follow.

When the integuments are divided and pressed apart the body of the uterus appears, which may be recognized by its globular and white shiny appearance. We must immediately open this by an incision from above downward, in the direction of the outer incision, and large enough to admit the passage of the child, which will be four inches, generally.

The operator now introduces his hand into the uterus, and, taking hold of the child's feet, effects the delivery with celerity and prudence.

In making the incision into the uterus, great care must be taken not to do injury to the child, for, since this severe operation is performed to save the child, it is madness now to be careless.

Now feel for the placenta, and take it away. Everything must be removed or hemorrhage will be the consequence, as the uterus will not contract if anything is allowed to remain. A considerable quantity of blood will remain, but that soon escapes. As soon as this is done, the uterus will contract right down.

You must now close up and apply adhesive strips to keep the parts in juxta-position. No sutures are necessary in the uterus or abdomen. Bandages may be employed, as in ordinary incisions.

I would rather risk this operation than that of extracting a tumor from the neck, connected with the cellular tissue. I would

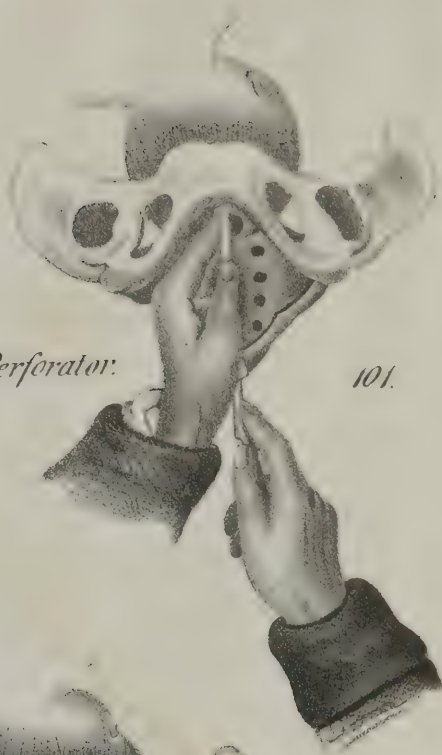
rather risk it, also, than the operation, lithotomy, if the patient were in the same state of health. In view of the proportionately successful operations, I think it is not so very dangerous, for, when we consider, that in nine-tenths of the cases, the patient is already exhausted, and a very slight inflammation occurring afterwards may prove fatal.

It has been recommended to induce premature labor where it is known that the pelvis is too small. This might be proper to save the life of the mother, and the child might be born before it is full grown. This would be better than to wait and risk the Cesarean operation, or to mutilate the child; but my advice would be, where it is known that there is a pelvis of such deformity as to render it impossible for an ordinarily-sized child to pass out without mutilation, to bring on abortion, at an early period, before the child has grown so large as to render it dangerous. The earlier the better, and the longer it is put off the more dangerous. There is, also, greater danger of hemorrhage.

Such cases may fall into your hands. Never try to induce abortion without counsel—you should have at least two other physicians. However much you may see the propriety of inducing abortion yourself, you will not be justified by the public in doing so, without the concurrence of some other physicians; but if you have counsel, all is right.

Application of the Perforator:

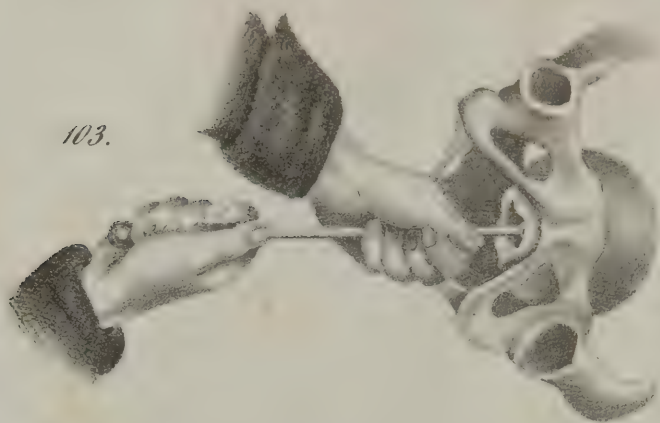
101.



102.

Application of Smellie's Scissors.

Extraction of the head with the new Extractor.



Extraction of the head with the Crochet Forceps.

LECTURE XXXI.

PERFORATION OF THE CHILD'S HEAD.

Should you determine to perforate the child's head, or to mutilate it, and take it away, you have to operate with instruments. The perforator is SMELLEY'S scissors.

It is diamond-pointed with two cutting edges, and the blades are very strong, and about thirteen inches long. This is to be introduced into the child's head; place in the position for turning; seat yourself between the assistants, and introduce the hand you are most in the habit of using, either left or right. We will suppose you are right-handed: introduce the fingers of the left hand along till they come in contact with the child's head, find one of the fontanelles, or, if you cannot find the fontanelle, introduce the instrument into a suture. Be careful in introducing the instrument to keep it in contact with the hand, so as not to lacerate any of the parts; it is sharp as a razor; (see *Fig. 89.*) Place it in the suture, turn in different directions, and open the blades, this cuts the bone; about two inches is far enough to cut in one direction. You should always put in the instrument up to its shoulder, in the child's head; (see *Fig. 102.*) Turn around and cut in the direction of the other suture. Then introduce it into the cavity of the cranium and turn it around, so as to break up the brain. If a pain comes on—we are supposing a compacted head or deformed pelvis, or a preternaturally large head—and presses it down into the pelvis, and the brain will escape, and the head will go down, then introduce the forceps and compress the head.

You may find it difficult to get hold with the forceps, take hold of a portion of the cranium at a time and pull it out.

The extractor is employed, also, for the purpose of taking away the head when the child is dead; (see *Fig. 103.*)

There is generally much difficulty in getting the head out—you can, for this purpose, use one of the blades of the forceps as a vectis. Take hold, piece by piece; get hold firmly and pull; you can exert great force, in this way, without doing much harm to the mother; the child, you must understand, is now dead. Have the patient fixed firmly, then take hold and pull. After you get the head away, there is no further difficulty, unless the pelvis is absolutely impracticable. There are no fixed dimensions of the pelvis, by which you can tell whether it is impracticable or not. It is said, however, that if it is less than an inch and three-quarters, you could not possibly get the child through; hence, if you find it smaller than that, you need not try. When the pelvis is from one to two inches delivery can be effected with instruments—of course, not alive, if less than two and three-quarter inches. English and American writers mention a case, ELIZA SHERWIN, of Philadelphia, whose pelvis was only two inches. She was delivered several times by mutilating the child with instruments, and once or twice by the Cesarean operation. You will understand that the destruction of the child is for the safety of the mother, and if the mother can be relieved in this way, do so, unless she and a sufficient number of her friends, understanding all the circumstances, determine to have the Cesarean operation performed.

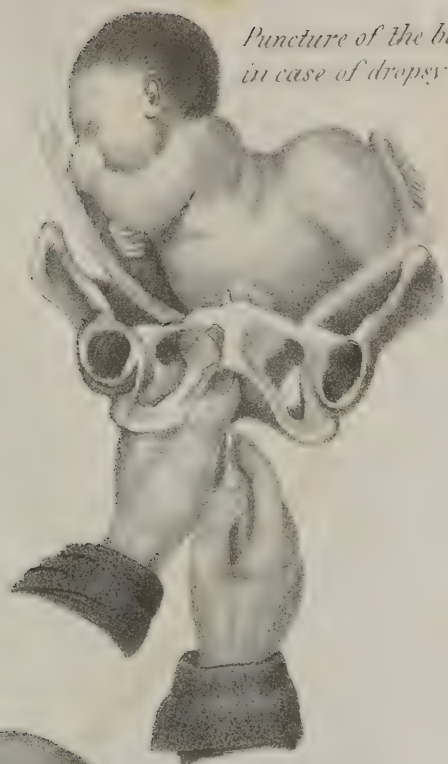
The perforator is also used for the purpose of piercing the cranium, in case of hydrocephalus; and the abdomen or chest, when there is dropsical distention, so as to impede the process of parturition. For an illustration of this operation, see *Plate XLIII.*

INVERSION OF THE UTERUS.

This may occur, while you are in attendance, from various causes. It may be partial or complete. There are various opinions expressed by authors, where there is partial inversion, as to the best manner of replacing it. If, however, it is inverted

*Puncture of the belly
in case of dropsy*

105.



*Puncture of the head
in hydrocephalus*

106.





entirely, and you find it impossible to get it back, let it alone. Prof. McDOWAL, of St. Louis, treated a case of inversion of the uterus somewhat summarily, in his early practice. He cut it entirely off, and the woman recovered.

And that very act of rashness, which might have sent him to the penitentiary, made him what he now is. It is a story which he tells on himself, and is highly characteristic of McDOWAL. He thought it would be less trouble to her entirely off than hanging out, and, doubtless, in that case, was the best thing he could have done for her, under the circumstances ; but such rashness should not be tolerated. I would not advise you to follow his course. If the proper attention is paid to the case in the beginning, there is no necessity of inversion of the uterus. After you think the delivery is complete, make an examination of the vagina and uterus, to see that everything is removed. I have never had but one case of the kind, and that was attended by an old lady during labor. She, however, understood her business very well, and it was no fault of hers. After the child was expelled, the next pain brought the placenta, and inverted the uterus. She did not know what it was, and sent for me ; I got there, and found the uterus inverted, and succeeded in returning it.

To return the uterus, take hold of the fundus, which is down, the uterus being inside out, with a cloth wet in cold water, grasp it gently—the cold water will cause it to contract—just hold on to that, and elevate, by introducing the other hand. The neck contracts during a pain, as soon as the pain goes off, push up with considerable force, and continue this until the uterus is replaced, and your hand is introduced into the uterus. It will grasp your hand very powerfully, and, in this case I speak of, I had to give her an emetic dose before I could liberate my hand. Before you attempt its return, lubricate your hand with oil or lard. If it is very firm, so that you can not get your hand through the os uteri, when you begin to push up, do not give it up : keep on till you succeed—for, if it has gone on twelve hours, probably it never can be re-instated by simply pushing it up. If it has been a long time, and thoroughly contracted, and the parts

rigid, I would apply the extract of belladonna, and continue this, even to perfect muscular prostration. If you can not induce relaxation with it—understand it is a most deplorable condition for the patient to live in. But, although it is a nearly hopeless case, still you may continue your efforts and push upward, but do not use a great deal of force, as inflammation may already come on.

Use warm fomentations—elecampane bruised and applied hot over the parts.

We have the advantage of the Old School in the way of producing relaxation. Our lobelia is worth more than their entire *materia medica*.

LECTURE XXXII.

CONCLUSION OF MANIPULATIONS.

Before closing my lectures on the practice of Midwifery, I deem it proper to recapitulate some of the important practical points connected with this subject; and to give you some hints and instructions with regard to a few particular matters, that will come under your notice in practicing medicine, and which do not appropriately come up at any particular point in the course of lectures.

In doing this, I shall repeat many things which I have said before; and, in this lecture, I shall endeavor to speak of things which will often present themselves in practice.

I will remark, that a majority of cases of labor come on at night. Generally, you will be called after nine o'clock, at night. Nine-tenths of the cases to which I am called are between nine o'clock, at night, and four o'clock, in the morning. As, probably, a large proportion of you will practice, may be, in the country, or in country towns, it is proper for me to give you some instructions as to the peculiar customs which prevail in the country; they differ from the customs in the city, or those recognized in your books.

Whenever you are called to attend a case of labor, you should go with all possible haste; it may not be necessary for you to be there immediately, and, yet, a few moments may be of vital importance to the patient, and you cannot know when such a case occurs, unless you are present. When you arrive, let it be announced, by some third person, that you have arrived. It is not

best for you to rush in and approach the patient, before she knows you are there. Many women, although they have given birth to several children, will be very much shocked under such circumstances. Her feeling of delicacy makes it necessary for her to know that you are there, a sufficient length of time before you approach her, for the first shock to pass off. Although she prefers you to any other physician in the world, yet by your coming suddenly into the room, it may have such an effect on her, that the pains will stop immediately, and dangerous consequences be the result. After waiting awhile, for the effect to pass off, walk into the room without appearing to be in any great hurry; approach her with a pleasant, sympathizing countenance, as though you have perfect confidence in yourself. Place your hand on her forehead, as you approach; she will, generally, offer you her hand. However, some one will, generally, introduce you, if you are not acquainted, or, even if you are acquainted; if not, introduce yourself; it elicits her good feelings.

Seat yourself by her, with your fingers on her pulse, whether you notice her pulse or not. After sitting a few minutes and conversing upon common-place matters with the company; you should direct your questions to her in rather a low tone of voice, as though you did not wish the bystanders to hear you.

Ask her if she feels much pain—do not say labor pains at first—nor should you speak in a melancholly manner, but rather pleasantly and sympathizingly. She will answer you readily. Then ask her if they are bearing down pains; she will answer you promptly. Ask her if they are regular. She may not know what that means; then you should tell her. She will know what is meant by bearing down pains. You may ask her if her full time has arrived; she will answer that, also, for she knows that it is important for the practitioner to understand this, if she has borne children before. Ask her if she has usually had an easy time before, or not; also, whether she has been in the habit of flooding. You should inquire into the general state of her health; whether she is habitually costive; whether the bowels have been evacuated during the last twenty-four hours, by an

enema or cathartic—generally it is better to do this by an enema. Inquire about the state of the urine, whether she has passed urine, or not, recently. If not, that should be attended to.

All this should be spoken in a low tone of voice. If the patient is a young female who has never borne children, and there is an old lady present—a mother or intimate friend—have her near, so that, if the patient is unable to answer your questions, the other lady may answer them for her. During all this time, keep on a cheerful countenance, but avoid the appearance of levity. This latter may be acceptable to the patient or it may *not*, and if not, you may disgust her, or other persons present, by such a course.

After you have made all the inquiries that are necessary, enter into conversation with the company, still sitting by her, and wait for the pains to come on. Let the conversation be of such a character that the company, generally, will engage in it; but, by all means, do not speak of any sick person, if you can possibly avoid it; but, if broached by any of the company, give an evasive answer. They will be apt to ask you about some of your patients—change the subject—talk about something else, even politics, if you cannot get something else. If ladies, you may talk of the fashions, or some literary and scientific subject, if the people be of that class; but be careful not to introduce subjects and use language not understood, or you will be justly accused of egotism. Make yourself at home, and all present will feel easy in your company, and you will have the kind feelings and sympathy of all around you.

You should always converse on subjects familiar to those around, and, as remarked before, avoid any reference to disease, as much as possible. If you are among farmers, your conversation will probably be on the subject of farming. I know there are some persons who take every opportunity to harp on disease, especially is this the case with chronic dyspeptics—if there is such an one present avoid him.

All this time, watch the patient closely; watch her disposition and turn of mind, for, if you are not already acquainted with

her, you will need to know something of her turn of mind. If she is serious and melancholly, try to cheer her up; but do not rally her with levity. You may sympathize with her, but avoid melancholly—you should be cheerful. If she be of a cheerful turn of mind it will do no harm to joke a little, but not too strongly upon her. It is wrong to joke a lady too strongly at any time, but at this time especially. And if she jokes you pretty strongly, turn it off in a pleasant manner—even if they get the advantage of you.

Be on your guard, as the pains go on watch closely for two or three pains, to ascertain if they are regular, and whether she bears it with courage, or is disposed to yield—whether she suffers much. Watch closely, yet you ought not to appear to be wholly absorbed and anxious. If she has borne children before, tell her, in a low tone of voice, that it is necessary for you to make an examination; if, however, it is the first, you should inform her, through some old lady—a mother if she is present—however, let me say here, avoid having a mother present, if possible, for, if there seems to be danger, they are sure to be frightened, and this has a bad effect on the patient; but if they are present, you should pay due deference to them.

At all events address your remarks to the old lady that seems to take the lead, and inform her that it is necessary for you to make an examination, and then you can address the patient; she will not object to it. Then tell some one present to furnish you with what you need, warm water to warm your hands in, unless it is warm weather, and even then it is better to warm your hand, ask for some kind of grease—or, it is better for you to carry a bottle of sweet oil in your pocket, and they will look upon this as being very thoughtful in you.

But, sometimes, the very intimation that you wish to make an examination will be enough, and everything you need will be furnished to you—water, cloths to wipe your hands on, etc., and, if it is a fashionable family, they will give you nice clean napkins; but, if they are poor, they will furnish you with some old cloths, to wipe your hands on. Now, these are little things which you

may consider of no importance, but they may, nevertheless, cause you sometimes to be placed in an unpleasant position, if you should not understand yourself. These cloths should be tucked under the mattress, or feather-bed if she is on one, between that and the bed rail, where they will be convenient; the towels are in another part of the room. Then, after having warmed your hand, rolled up your sleeves—do not take off your coat yet—and be careful of your manner, for you must not draw your coat and roll up your sleeves, as though you were going to butchering; just roll up your coat-sleeves a little. Warm and lubricate your hands. Sit so that your face is to the patient's face, but you need not place your eyes on her. If you are right-handed, sit so as to use that hand; but, if left-handed, use your left hand. Have the head a little elevated, also the hips, so that the spine is somewhat curved; the legs flexed on the thighs, and the thighs on the abdomen; or, if she does not thus adjust herself, she need only draw up her feet a little, so as to raise her knees. Introduce the hand, under the bed clothes, under the thigh, and, at the time of a pain, introduce your hand into the vagina; wait till the pain goes off, and then make your examination. In making the examination, ascertain all you can. Examine for the presentation. Ascertain whether the os uteri is dilated; whether there is relaxation of the soft parts, (when I speak of the soft parts, I mean the labia-pudendi, in contradistinction to the os uteri,) and whether there is mucus secreted, sufficient to lubricate the parts. All these things should be thought of in making an examination.

You may, also, notice if there is deformity of the pelvis—whether the uterus is high up or low down—whether the perineum is rigid or relaxed—whether the bladder is distended or not.

LECTURE XXXIII.

CONCLUSION OF MANIPULATIONS.

(Continued.)

Having ascertained that it is true labor, and that everything is right, you can wait awhile. Generally, when you first arrive the labor is not sufficiently far advanced to ascertain the presentation. If the labor advances slowly, you can let her rest. Wash your hands, and retire from the room, or take a seat in a different part of it. If, however, the labor is progressing rapidly, you should lose no time in preparing the patient for being put to bed; I mean with regard to dressing. You should insist that the patient be dressed for being put to bed—that she have all the clothes on that she is to wear afterwards. See that they are dry and well-aired. Where the labor is progressing rapidly, after having put on this clothing, then fix her bed or seat. You ought to know what is meant by a *seat*: this is a technicality, and if you do not know what it means, you may find yourself embarrassed, as I did, the first time I ever heard it.

A seat is made by fixing chairs together, and boards laid across them, so that the patient can lie on this temporary structure, instead of a bed. The chairs are fastened together by chords or some kind of strings, which hold them firmly, boards are then laid on the chairs, and a mattress and some quilts, that will not be injured by the flooding.

You should always assist in doing such things. In the country, they will, frequently, ask if you will have her lie on a seat, or on the bed. You should leave it to the choice of the

patient; if she has no choice, leave it to the ladies present; and, if they leave it entirely to you, fix it as you please. They will, generally, have a choice: if they put her on a bed, they usually remove the feather bed, and elevate her head. If she is placed on a seat, it should be so arranged that her head can be raised. Let her move frequently, unless hemorrhage or something else forbids. Having arranged this matter, all the clothing which she is to wear after delivery should be folded up above the pelvis, so as to be out of the way of the fluids. They should be folded up regularly, so as not to make too much unevenness; then let a sheet, three, four, or five thicknesses, be pinned around her, and lapped over one-third of the way around her, and pinned around her waist, with one pin, half way between her spine and side, with the head of the pin outwards, so that you can reach round and take it out without disturbing her. This sheet prevents anything else from being soiled by the fluids; and when you get through, and ready to put her to bed, all that you have to do is to unpin this and take it away, and she is already dressed, and no further trouble.

When thus arranged she, generally, places herself on the bed, seat, or whatever is prepared. As the labor progresses, she will often want some one to press her back or her hand, or her back will be so distressed that she will want it elevated with a pillow, or the ladies will put a towel under her back, and thus sustain it.

Now, if you are present, you are expected to take right hold and help in all these matters, as though you were at home, and it was your place to do so.

She may suffer from this pain in the back very severely, and this is the only way to relieve her. She will want to change her position occasionally—you must let her do so. As the labor advances, she will have great distress with griping pains, but these will pass off after awhile. These pains will cause her to cry out for help, and some of the ladies will be, more or less, frightened, and will want to know, "Doctor, can't you help? Can't you do something to relieve her?"

You may know that nothing is needed but a little patience, but this will not satisfy them. You must affect to do something: be sure, however, you do not give medicine, unless it is required. You should be prepared with a little colored water—it makes no difference whether it has taste or not—they will take anything, and, whatever satisfies the mind, is medicine to the mind, and does them good. But, sometimes, medicine is really required; if so, give it. Black pepper will, generally, be recommended by the ladies, and is very good to bring on the pains. But these pains may be owing to rigidity of the os uteri, and become more irregular and distressing, then you should do something.

My medicine is a nauseant. I always go prepared with our common emetic tincture. Lately, I have used the extract of lobelia with good effect.

When this rigidity is severe you may apply bitter herb fomentations; apply them warm to the parts; have them steeped in hot water and applied over the pudendum. If, however, you discover by examining that there is any unyielding rigidity of the os uteri, apply extract of belladonna, and, at the same time, if this does not work fast enough, give your nausea; it will not retard the labor, but, while it suppresses the rigidity, it will make the labor pains regular. At this stage of the labor, you should make an examination to ascertain the presentation; if you cannot ascertain, wait till two or three pains have come on, and examine again. When you find all is right, you need examine no more. When the head comes down on the perineum against the labia, the membranes are generally ruptured; at this point the pain is very great, and the perineum is on the stretch, and should be supported by the hand.

Some practitioners have an apron on at this stage, and when I desire anything in this way, I usually call for a sheet, which I fold lengthwise, so that it will be wide enough to go half way round me, and then fold it the other way, so that there is no danger of stepping on it, and pin it around over the shoulders. You need not have it tied about the waist at all. It will cover you all over below the chin, and no fluid can pass through it.

Probably, if the membranes are ruptured, it will not be long before the labor is completed. If the pains come on frequently, and the perineum is considerably stretched, and the labia offer much resistance to the passage of the child, you should press against the perineum and support it. You may do considerable in this way. Warm cloths applied on the labia and perineum will do much to relax the parts.

Just at this stage of the labor you will, by examining, feel the head—the scalp protruding up. It will feel soft, like a tumor. If you are not acquainted with this circumstance, you may, sometimes, be disappointed in delays that occur, even now, at this late period—the labor may remain in this stage for hours.

Under such circumstances, you must use means to relax the parts: apply cloths wrung out of hot water, or use warm fomentations. After the parts are relaxed, and the pains become sufficiently strong, the head will emerge. The head rises right up, instead of emerging in a horizontal line, as you would suppose. You will be surprised at this. The position will change, so that the labia will be horizontal, and the head between them. The trouble is then nearly over.

You will here bear it in mind that the person of the female need never be exposed, under ordinary circumstances. You can do all by the sense of touch, and under the cover. It is inexcusable to uncover a woman in common labors.

LECTURE XXXIV.

CONCLUSION OF MANIPULATIONS.

(Continued.)

I stated that, as the labor progressed, the head descends low down on the perineum and presses against the labia, the membranes are generally ruptured, and the pain is very great. I directed, at that stage of the labor, that an examination should be made, yet, that you should not handle the parts too much; but the introduction of the finger, just so as to touch the head, and, if the perineum is greatly stretched, to put your hand against it, or, with a warm cloth, to press up the rectum. I, also, stated that the scalp was protruded, and appeared as though the labor was nearly completed, yet it might be retarded for hours, and the patient is also often disappointed at the delay, and will, not unfrequently, be quite out of patience, and will petulantly demand how long she is to suffer. Be careful how you make promises. It may be that the labor will soon be over, but yet you may be deceived, and you ought not to promise. If you promise her that it will soon be over, and it is not, she will be discouraged. Frequently, when they ask me when the labor will be through, I tell them, we will get through sometime between this and next Christmas. Be sure you do not fail in your prognosis.

The retardation of the labor is owing to the rigidity of the soft parts, or, of the os uteri, or both. In such a case as that, use warm fomentations applied to the soft parts, and, in inveterate cases, the extract of belladonna to the os uteri. Do not

fail, in these cases, to employ the lobelia—use it in nauseating doses. This is the best means to bring on relaxation, and complete the labor. Now, you ought to know the labor is progressing, and it changes, sometimes, more or less, every pain, you should examine—you can do so, conveniently, sitting by the patient. You should keep your hand constantly by the pudendum, but be cautious about too much handling of the parts, as it will suppress the proper secretion of mucus, which is very necessary to lubricate the parts, as the head emerges. The physician certainly has modesty enough not to interfere too much by manipulation about the labia.

The head instead of passing out in a direct line with the superior strait, passes out on a line with the inferior strait; the axis of the inferior strait changes, and the head rises up in nearly a perpendicular direction, as soon as it has emerged.

One of your hands should be passed briskly over the child's face, so as to remove everything from the nose and mouth; separate the lips, with the finger, so as to give it fresh air, for it will breathe then, unless it is in a state of asphyxia, and if it does not breathe, it will not live. The chord may be around the child's neck; if so, take hold of the chord and pull gently on the end that gives way, pass it over the child's head or shoulder, whichever is easiest; but you may not be able to do either; if not, put your fingers under it and spread it out, so the blood vessels will not be pressed. But, if the child breathes, it will live without circulation through the chord. Be very sure that the child has once breathed freely, and then do not let it stop; when it has taken one full breath the foramen ovale closes, and it must then have free, fresh air, or it will die. Keep the patient still, so as not to injure the child by moving about. While one hand is around the child's neck, place the other over the abdomen of the mother, keeping up a brisk friction so as to excite the uterine contractions; no matter how quickly the labor is completed, after the child's head emerges; but, if it remains an hour or two, support the child's head, and allow it plenty of fresh air. As soon as the head emerges, tell the patient that the "head is born."

She will then know that it is important to keep quiet, and attend to all the directions ; for the safety of the child depends on this to a great extent, and there will be almost a breathless silence till the labor is completed. You should warn them to keep still. Then you may tell her to make exertions and bear down. If the shoulders do not rotate, the labor will stop. Under such circumstances, introduce your hand under the sub-pubal arch, and, if the shoulder has not rotated, introduce your finger and press down a little, as soon as this is done it will escape immediately. As the child escapes from the os-externum there will generally be some blood, and, if the placenta has been detached, there is generally from one to four ounces.

The birth accomplished is usually followed by a general exclamation of joy from the mother, as well as from those who are sympathizing with her—they considering the danger all over. Although there is this extreme excitement all around, do not become excited yourself, and drawn off from your proper duty. You may be as much rejoiced, and, of course, you will, if you see that the danger is passed, as any of them ; but do not let this throw you off your guard. Attend to the breathing of the child, if it has not breathed ; or if it stops breathing, turn it over on its back, inclining to the right side, elevate its head, blow in its face, and, if this does not do, throw cold water into its face, and use brisk friction over its chest. Take the water in your mouth and blow it into the face. This will, usually, arouse the child instantly, and it will scream right out. When a child has screamed out, do not try to stop its crying—the louder it screams the better. If this does not succeed in restoring the child, do not give up your efforts—continue for half an hour. If the chord pulsates, or is even warm, continue your efforts, by adding to what I have advised artificial respiration, by blowing into the mouth, and, at the same time, pressing on the diaphragm. You may hold a little ammonia to the child's nose ; however, I don't have much faith in that.

If everything goes on right, as soon as the chord ceases to pulsate three-quarters of its length, you should call for a string

and a pair of scissors—however, it is well for you to have a pair of blunt-pointed scissors in your pocket. The string should be large enough not to cut the chord, and strong enough to hold. Tie it about an inch from the abdomen, and then about an inch from that point you will put another ligature, and cut between the two ligatures. You may then cut the chord and hand the child to the nurse. In taking up the child, take the head in one hand, between the finger and thumb, and the feet in the other; by holding it in this way, there is no danger of its falling. If you do not hold the child this way, it may, by squirming, get out of your hands. It is very slippery, and the muscular power of a full-grown healthy child is great. But in holding it in this way, if one end gets loose, you have the other safe. You should also observe that the nurse receives the child safely; have her take it in a cloth; generally they lay it down in a bed. But, very frequently, an old lady will have an apron on purpose to hold it in, when she will place it in a position where it will be warm and comfortable. You should direct her to lay it on the right side, for the reason that this favors the closing of the foramen ovale. You will recollect in describing the fetal circulation, we said, that the blood passed from the right to the left side, without passing through the lungs: if that action were to cease before the child breathes it would die; but after it breathes, if this does not cease it will die; and the valve which closes the foramen ovale does not close very firmly at first, and frequently the force of gravity and the blood pressing against it is sufficient to force it open.

I have sometimes had my orders to the nurse disobeyed, and they would cry out, the child is in spasms: I simply tell them to turn it over, and it will come to instantly. The child generally cries a good deal, and a little cold water will most usually stop it. During all this time, from the birth of the child till it has been given to the nurse, you should continue your grasping on the abdomen of the mother, in order to promote the contractions of the uterus. You can do all this with one hand, except when handing the child to the nurse. But if contraction does not go

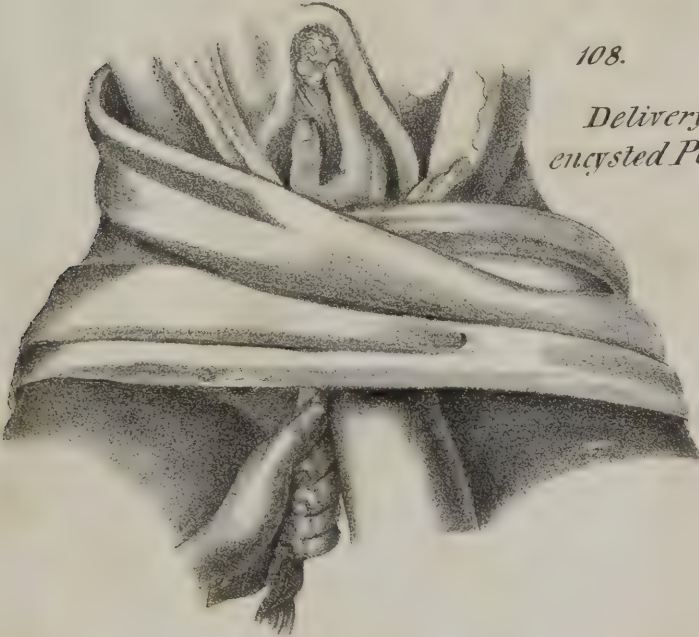
on well, use brisk friction with the hand over the region of the uterus, and continue that for some time, until thorough pains have come on; until the chronic contractions have expelled the placenta. The placenta should be expelled directly after the child is born; if not, then after the chord is cut and the child handed to the nurse, you should introduce your finger along under the chord, and, by raising the placenta, while you draw upon the chord with the other hand, you will bring it away. But if you fail, you must introduce your hand to take it. (See *Figs.* 107 and 108.) You will easily find the placenta, by tracing along the chord with your hand, having first straightened the chord by gently pulling at it. Be careful, however, that you do not sever the chord from the placenta; that would indeed be an awkward predicament. If the placenta has been expelled partly from the uterus, and is down in the vagina, you will feel it there the moment you introduce your hand; work your finger into it and take it away. If, however, it is still in the uterus, wait awhile if there is no hemorrhage or spasms, or any thing that would indicate the necessity of removing it immediately; if, however, you should find half of it is projecting from the mouth of the vagina, take it away. When the placenta seems to hang firmly, let it alone—wait for more pains to come on. If they do not come on in an hour, (some say half an hour, and others two hours,) introduce your hand and take it away, and, in doing so, be careful to remove all coagulated blood, and everything else you may find there. But the placenta may still be attached, introduce your fingers and gradually peel it off, and take it away. But there may be an organic attachment, so that you can not get it off without injuring the patient; in this case, you had better let it remain to putrify and come away of itself, though that is a very disagreeable process, and will sometimes wear out the patient. Still, however, this is better than to risk tearing the uterus in detaching it. For thus excessive hemorrhage will be the necessary result. You may wait eight or ten hours, and see if it will not be more easily detached. Use means, also, to excite to contractions—give medicines, if necessary, to produce

107.



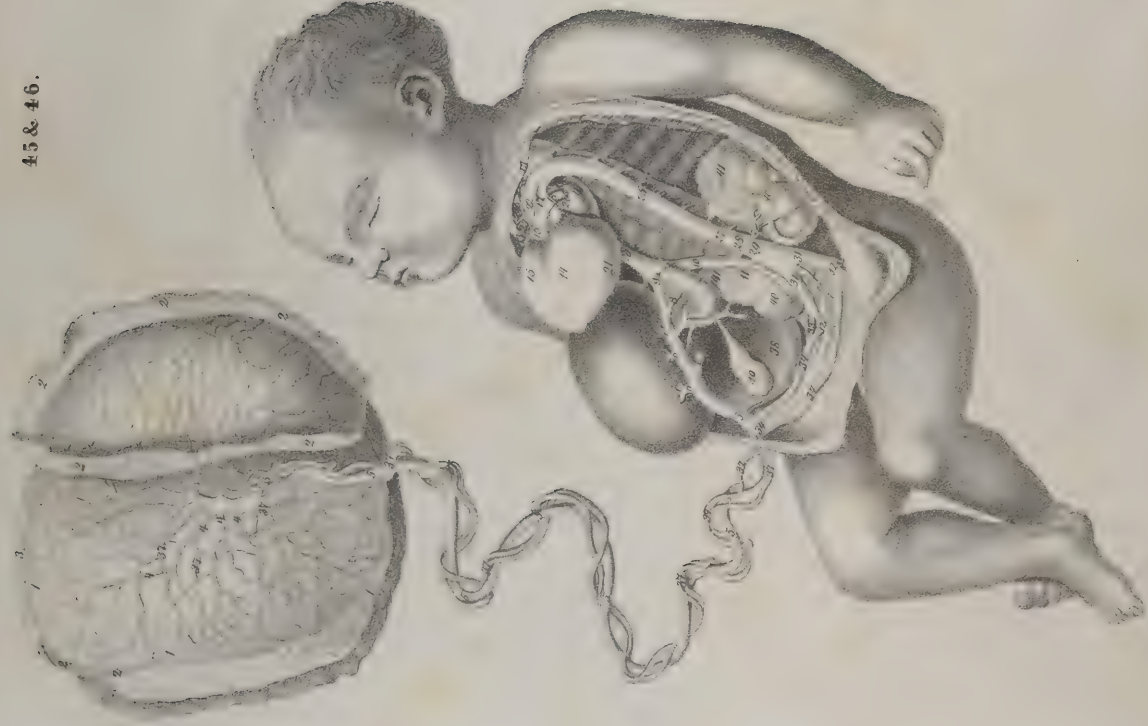
*Delivery of an
adherent Placenta.*

108.



*Delivery of an
encysted Placenta.*

45 & 46.



them—use ergot, from time to time, if you can do so without doing harm. If you find, after using these various means, that you are compelled, for the safety of the patient, to let it remain, have a counsel, so as to divide the responsibility. It is safer for your reputation to have other men's opinions, and, after a consultation, it is not difficult to make all concerned know that the after-birth could not be safely taken away.

In ninety-nine cases out of a hundred, however, you will be able to remove the placenta immediately after the birth of the child. You will then let the mother rest a few minutes, till she recovers from the fatigue of the labor, as she generally will in twenty minutes—remove everything that is wet or soiled from around her, and have her washed all over, where stained, with tepid water, and then wiped dry. In doing this, the patient should not be moved. If it is cold weather, have the water warm; or, even if the weather is warm, be careful not to have the water cold enough to chill her. The warmer the weather, the more likely you are to give her chill, by the evaporation of the water. Do not fatigue her after this—she should rest a few minutes before moving her. If she has been in the habit of the hydropathic regimen—that is, if she has had a hydropathic preparation—you may use a wet bandage, but, if not, put on a dry one over the lower part of the abdomen, so as to compress the muscles down to their natural state, and to reduce properly the uterus; put four or five folds of cloth over the region of the uterus, and have your bandage so situated as to press this organ upward, and not downward. If there is much soreness of the labia, perineum, and muscles of the abdomen, bathe the parts in dilute tincture of camphor, or the tincture of myrrh. If the latter is used, it should not be stronger than a drachm of the tincture to a pint of water, which will make it strong enough to produce smarting. Let cloths be wet in this tincture, and laid over the labia.

As soon as you have done this remove her to a clean bed, provided she has sufficient strength to be removed, having removed the soiled clothes from around her, and applied a dry cloth

over the os-externum to prevent her clean clothes from becoming soiled, as they are to be pulled down as soon as she is washed. If she cannot be moved to another bed, put her in a dry place on the same bed. If the practitioner is very careful, or is provided with an oiled-silk bed-shield, he need not wet the bed, nor cause a necessity for having the patient changed into another bed. You should be careful to have her head lie about on a line with the rest of her body, if she can lie so; keep her still; she should not be allowed to raise up, for this might bring on hemorrhage or prolapsus. As soon as she is put to bed she should have a drink of cold water, whether she calls for it or not. I never knew a patient, under such circumstances, to refuse cold water, if offered to her. Do not give her brandy, gin toddy, or any kind of alcoholic liquor, as is too frequently the case, but give her pure, cold water.

LECTURE XXXV.

CONCLUSION OF MANIPULATIONS.

Having finished the attentions in parturition, you should remain and make yourself useful; examine the cloth applied to the pudendum, and see if there is any flooding; if there is flooding, of course, you will attend to that. You should give strict attention to having the child washed very clean. It had, generally, better be bathed all over with oil, especially if it is covered over with the white crust already referred to; for, if that be the case, it will be almost impossible to clean it without this. Then have it washed with clean soapsuds. Be very careful to have it washed in the armpits, groins, about the elbow, and every part where the flesh is wrinkled, for if these parts are not thoroughly cleansed they will become very sore and troublesome.

The child should not be handled too roughly—true, some children will bear almost any handling, but others are injured thus. All this done, direct the child to be put to the breast immediately, whether there is milk or not; if there is milk, it will swallow it, and it is the best food the child can take; if there is none, it will excite the secretion of milk and will, also, cause the uterus to contract, which is shown by the afterpains that are thus caused.

The afterpains thus excited, by the nursing of the child, may be so severe as to make the patient scream right out, but they will be over the sooner. If they come on and continue too long and severe, you can attend to them afterwards.

Well, this completes all you have to do for the time being, for

the child and mother. By this time, some of the company have put the room to rights, and others have prepared a good supper, which is by no means unacceptable, especially if you have been riding eight or ten miles, or have been in attendance much of the night.

By the family it will generally be considered quite a compliment for the doctor to remain and eat; but others, again, consider that they are conferring a favor on you by this hospitality. But, however this is, you will do well to remain several hours after delivery if you can, and observe how your patient and child are doing.

It is not always customary, in the city, to prepare a meal on such occasions, still, sometimes, we find it so. I have found the finest suppers I ever saw, on such occasions, in this city. They would have the richest luxuries of the table and the costliest wines—however, being a temperance man, I do not drink the wine. Yet, I sometimes do full justice to the more substantial comforts of life.

You should, generally, call next evening and inquire after the patient, and see if there are any symptoms requiring your attention. It may be necessary to give her medicine, but do not unless she needs it. It has been recommended to give her cathartics, as a matter of course, but my plan is to give medicine only as demanded by the symptoms, as under ordinary circumstances; and so with the child, you need not physic that as a matter of course. Not one in a hundred will require any medication; but if the mother has no milk, you ought to feed the child. For this purpose, you should dilute cow's milk with an equal quantity of boiling water, sweetened with loaf-sugar. Do not give it more than four tea-spoonfuls every three or four hours: if it is allowed to eat as long and as much as it will, it will kill itself. If, however, the child is costive, and nothing passes through its bowels for twenty-four hours, you may give our common neutralizing cordial; or, you may give the compound powder of senna, in the form of an infusion, in doses of a quarter of a tea-spoonful, from time to time, till it operates.

Recently, I have been in the habit of giving the mother a combination of the compound powder of senna, and the compound powder of rhubarb, ten grains of each to a pint of boiling water—sweeten, and give every hour. If there is any appearance of fever, give her podophyllin. If she is sick any time during utero-gestation, treat her for that sickness, as you would under ordinary circumstances, or as you would any other person with the same symptoms. I do not believe that pregnancy is to be properly considered a pathological condition any more than the normal exercise of any other function. It is true that the constant violation of the physiological laws in civilized society has, to some extent, rendered this a sickly condition, but it is not necessarily so.

After the labor is completed, you should not allow her to get up under twenty-four hours, that is, to stand or sit upright; for it may cause prolapsus or hemorrhage; but it is a general rule where there are no unfavorable symptoms, to allow her, at the end of twenty-four hours, to sit up for a time in a rocking-chair, or walk about the room a little; but, if there are any unfavorable signs, as of hemorrhage or prolapsus, you should keep her quiet, until you are satisfied that all danger is over.

In regard to this, we should ever consult the habits and the strength of the patient. If she is able it is better for her to get up and wash, and if she has previously been in the habit of bathing, up to the time of her confinement, allow her to take the hip bath—let her do as she likes. But, if she has not been in the habit of bathing, it will not be well for her to use cold water at first. Let her take a tepid hip bath, and, if she has any soreness about the back and pelvic region, it will have a tendency to strengthen her very much, and, as she becomes more accustomed to the hip bath, she may gradually take it colder. It must be remembered, however, that as to bathing, as well as in taking medicine, that we should not practice it unless it is required.

Having, in the last two lectures, gone over the whole ground of the accoucheur's duty, from the commencement of labor pains

to the time when he dismisses his patient—having thus completed all I wish to say relating to the science of Obstetrics, I shall next commence with those diseases of females, which are connected with utero-gestation and parturition—the most important and dangerous of which being puerperal fever, I shall commence with that.

LECTURE XXXVI

DISEASES OF WOMEN.

PUERPERAL FEVER.

Puerperal fever and child-bed fever are terms applied to one of the most dangerous, and, under ordinary circumstances, one of the most fatal diseases that comes under the observation of the practitioner. It is a disease peculiar to lying-in women. It differs, in many respects, from other fevers. It consists of extensive inflammation of the peritoneum, and frequently connected with inflammation of the womb; in fact, it is supposed by some always to commence in the womb; yet I doubt this, for I have seen many cases where there was no inflammation whatever of the uterus. There is, at this time, a particularly deranged condition of the womb, and which marks this as a peculiar case, differing materially from ordinary inflammation.

It usually occurs from three to five days after confinement, though it may occur within a few hours, or, perhaps, not until several weeks.

The first symptom is, usually, a severe chill, differing not very materially from the chill at the commencement of an ordinary fit of ague. This lasts for a longer or shorter period, generally an hour, although it may last for two or three hours, according to the reactive powers of the patient. During the chill, we have most of the phenomena which accompany other chills—extremi-

ties cold, shrunken skin, difficulty of respiration, with more or less soreness in the abdomen. Pain in the uterus is a characteristic of this disease. The patient complains of severe pains in different parts of the body, as well as the head. The secretion of milk is suppressed; the lochia ceases; the secretion of urine is generally scanty, if not entirely suppressed, and the bowels are costive. The chill is soon followed by fever of a high grade; the pulse rises and becomes full and hard. It generally rises to one hundred and twenty, and, sometimes, as high as a hundred and forty—though it is difficult to count after it is a hundred and forty: yet, some say, it can be done at one hundred and sixty. I have never been able to count so rapidly. When the pulse rises above one hundred and twenty, it becomes hard, small and chorded. The patient is delirious, the face flushed, the eyes red, and a great deal of preternatural heat about the head and in the abdomen. At the commencement, there may be a little soreness on the abdomen. The first symptom is, generally, at the umbilicus, within a space not larger than a dollar, this point will be extremely tender to the touch, while the other parts of the abdomen do not seem to be effected at all. It may make its first appearance in the uterus, but it rapidly spreads until the entire surface of the peritoneum is involved. The abdomen becomes tympanitic, and the tenderness becomes so great that the patient is unable to bear the weight of the bed clothes. She lies upon her back, with her head elevated, her legs flexed on her thighs, and her thighs on her abdomen, so as to relax the muscles of the abdomen as much as possible. The extremities are, generally, cold or cool; the feet, and limbs as high as the knees, are apt to be cold; the circulation, in the lower extremities, being quite languid; the skin is dry throughout. There may, sometimes, be a cold perspiration upon the forehead, nose, and upper lip, forced out by the extreme pain—almost like the death sweat. As the disease progresses, the tenderness increases, as the delirium, and the tympanitic condition becomes more marked, and there will be discovered on the abdomen, an appearance of a gangrenous condition which terminates in mortification. It runs

its course in from twenty-four hours to five days: few survive over five days, though, occasionally, they will live much longer. The breasts shrink down and become flabby, and the eyes have a peculiar, glassy, anxious, death-like appearance. There is a great deal of restlessness; though, through the dread of consequent pain, she refrains from moving, and, in fact, she soon becomes incapable of moving.

Treatment. It is directed in the books of the Old School to use the lancet: this is looked upon as the sheet anchor. They recommend taking large quantities of blood—to the extent of causing fainting—leeching, cupping, blistering, etc.; none of these means, we avail ourselves of. But the history of cases treated in this way, together with calomel, ipecac, and opium, shows, according to their own account of it, a most woeful picture of ill success—forty-nine cases out of fifty being fatal. No wonder! Take the healthiest woman that walks our streets, and treat her just as they treat those thus enfeebled and worn down by a long and tedious labor, and I would dislike to risk my fortune, or my reputation, on her recovery, or even that one out of ten would recover; and, yet, that treatment is still recommended, and still persisted in, notwithstanding its fatal character. I speak thus confidently, having some little knowledge of physiology, as well as my own knowledge of its bad success.

In a region of country where I am acquainted with some ten thousand individuals, within twenty miles circumference, during one season thirteen women died of puerperal fever, and but one case recovered in the neighborhood, and that was treated by a graduate of this college, and a classmate of mine. A whole street, in the neighborhood, was clad in mourning—the mother's of ten or twelve families having died with the disease, and most of these were healthy, robust women, none of whom was treated in accordance with the practice we recommend, but the one above referred to, who recovered. The course of treatment which we have been in the habit of using, and which I shall recommend is very different, and has been found to be very successful.

LECTURE XXXVII.

PUERPERAL FEVER.

(Continued.)

If called early while the chill is on, or immediately after the chill is subsided, before there is much tenderness of the abdomen, give an emetic. Begin by giving small doses of compound lobelia, or emetic tincture, diluted with considerable quantities of some aromatic infusion, for the purpose of rendering it more pleasant, and to prevent its nauseating immediately; gradually increase the quantity and frequency of the doses, until you have vomited the patient thoroughly three or four times; however, if she is very feeble, do not carry the vomiting to so great an extent. With respect to this, you must be your own judges. I can only give you the general treatment of common cases, in the minutiae you must be governed by your sense of propriety. If it is so far advanced that there is already considerable soreness of the abdomen, it will not do to give an emetic, the act of vomiting will irritate and increase the soreness of the abdomen, more than it will do good; and you must forego the advantage of giving an emetic in the onset.

The emetic I have always been in the habit of using is our common emetic tincture. Whatever you use, let it be something of which the principal part is constituted of lobelia. There is no doubt but this acts better than any other article. If I give the common emetic tincture, I give an ordinary tea-spoonful in some aromatic infusion, and repeat the dose about once in ten or twelve minutes. If there seems to be any irritation, let the interval be longer to every subsequent dose, and add half the

original quantity—making a tea-spoonful and a half to two tea-spoonfuls. Thus increase the quantity, till you have vomited the patient two or three times. This will usually bring about a free perspiration, but it may not be a general perspiration. If the disease is so far advanced that it is not proper to give it, give a cathartic. If you have given an emetic, of course, you will wait till the nausea has entirely subsided before you give a cathartic; for, if the patient is nauseated at first, even though there is but little soreness, the stomach will not retain the medicines. Giving small portions of the tincture of lobelia will, frequently, allay the vomiting, without causing nausea.

After the nausea is allayed, give a cathartic; we used to give salts and cream of tartar, but, for the last two years, I have used podophyllin and cream of tartar; half a grain of podophyllin and half a drachm of cream of tartar, and repeat the dose once in two hours. The two articles should be thoroughly triturated together, as this makes a very great difference in their effects. It produces more general constitutional effects, and podophyllin, if given by itself into the stomach, is apt to produce nausea—however, in this tympanetic condition there is not much probability of producing vomiting, as there seems to be entire insensibility of the stomach, which is not affected by impressions of the brain.

When the patient is delirious, it is hard to affect the stomach, on account of the torpidity of the nervous system, and so it is in this case. Repeat this every one or two hours till it acts thoroughly, then cease. It will operate six or eight times, and this in as many hours, or in twelve or fourteen hours. During the time you are giving this, give a warm infusion of spearmint or horsemint. Let the patient take this frequently. It is a diuretic and diaphoretic, and should be given not only during the operation, but a considerable time afterwards. However, if there is nausea, you should be careful not to overload the stomach too much. Usually, there is no difficulty, and the larger the quantity the better—it produces more of the diuretic effect. But, as yet, I have said nothing of the external applications, though

they are of primary importance, and you will make but poor progress without them; and, were I to rely entirely upon either, I would choose the external, and discard the internal; but you can avail yourself of both: for instance, while you are using internal means, put the patient's feet in hot water, and, if this can be done in no other way, move the water to the bed, and let her feet hang over the side of the bed, and immerse the feet and legs in water as hot as she can bear it; so that the small vessels will be filled to congestion. If you cannot bathe her feet in hot water, wring out flannel in hot water, and wrap the feet and legs in it; dry flannels should be wrapped around this, to prevent evaporation. Take hot bricks, previously immersed in water, or, what is better, bottles filled with hot water, and place them close by the side of the patient. The hands, also, should be placed in hot water, up to the elbows, for they are generally cold. Bathing the hands, as well as the feet, is a practice not so generally attended to, though bathing the feet is as old as the science of medicine. Bathing the hands, however, has only lately been tried; but those who have tried it once, will never forget it again, for they will see its beneficial effects, and be so impressed with its advantages, that they will continue to use it. After bathing in hot water, wipe dry, and bathe with good stimulating liniment; for this purpose Kost's Pyroxilic oil is very superior. At the same time you are making these applications for the purpose of equalizing the circulation and restoring it in the extremities, you must use means to divert the flow of blood to the surface; make applications over the surface; for, although the internal vessels are inflamed, the external surface has a deficiency of circulation. The sense of tenderness is not in the muscles of the abdomen, but in the peritoneum.

My practice has been, to apply a strong stimulating liniment over the region of the inflammation. The pyroxilic oil is invaluable for this purpose—if nothing else is at hand, apply spirits of turpentine.

Before I became acquainted with the superior rubefacient and counter-irritant properties of the pyroxilic oil, I generally used

a liniment composed of spirits of turpentine—say, one pint alcohol; capsicum, one ounce, and gum camphor, one ounce; but you may, perhaps, make some other as good or better. I have, also, used another liniment, the proportions of which I do not recollect now, but it was composed of some of the following articles: tincture of capsicum, lobelia, and aqua ammonia, combined with the articles I mentioned as constituting the other liniment.

You may use any very strong application, which will not excoriate the skin. These will not always take the blood from other parts of the body, but only starts it into action. It is well first to cover the abdomen with a mustard-poultice, made by wetting the superfine flour of yellow mustard in cool or tepid water—the water should not be above blood warm, as hot water will evaporate the essential oil of the mustard; heat it up into a paste of sufficient consistency to stick well, then spread it very thinly upon a cloth, and apply it over the abdomen. Your object is to produce a powerful impression that will instantly divert a large portion of the fluids away from the peritoneum. Yet, do not make the mustard plaster strong enough to terminate in desiccation. If you put it on strong enough to make a blister, you will have difficulty in healing it; besides, you will be prevented from using liniment afterwards. I would rather attempt to cure ten fly blisters than one mustard blister; but there is no danger of its blistering, if you pay the proper attention to it; and, in fact, by putting on enough to produce a blister in a short time, the patient will not bear it long enough to blister.

Blisters are produced by a slow process; but little is put on, so that the patient gradually becomes accustomed to the pain, and is better able to bear it. Put on enough to produce a blister in twenty minutes, and before that time, if the patient is delirious, she will come to and talk rationally of the pain, and have the mustard removed. You will not blister, but you will produce rubefaction of the skin, from the pubis to the sternum, causing, also, a roughness of the skin, by the filling of the small vessels. The patient will gradually become more composed, and

soon get into a profuse perspiration. Let her get thoroughly under the influence of this before giving a cathartic, then, if the cathartic seems to be tardy in operating, give injections. If you wait six hours and there is no operation, give injections of the emetic powder, composed of ipecac, lobelia, and sanguinary, made of the proper consistency to be easily injected into the rectum with a syringe. Thus, should the physic not operate in six hours, these other means can be brought to bear in twenty minutes. The patient will bear it without any difficulty, even if she is very weak, and, generally, in the course of four hours you will have an operation, and you can promote this by repeating the injections; but, if you can get her into a perspiration, you can wait for an operation. Keep the feet and legs warm, or even hot. After removing the mustard plaster from the abdomen, cover it over with a poultice of corn-meal mush, if she can bear the weight of it. Have the mush thick, so that it will not run off, and cover it with flannel cloth. This is the best treatment I know of. It sometimes happens that the patient cannot bear the weight of the application, if so, wring out cloths in vinegar and brandy and lay them over the abdomen.

Bitter herb fomentations applied over the abdomen are very good; or you can have cloths wrung out in brandy and covered over with dry cloths, so as to keep the surface hot. These should be continued along with diaphoretics given internally; especially as soon as the physic has operated. Give the common sordoric powder that Dr. MORROW was in the habit of using. I have also used the same with good effect. It is composed partly of sanguinaria and lobelia. Make a strong infusion of an ounce of the powder to a pint of water: give in doses of a table-spoonful, once in an hour; it has a powerful diaphoretic effect. Catnip in the form of an infusion produces an admirable effect. I have combined with it the asarum, but any of these diaphoretics, given with a considerable quantity of water, will answer a good purpose. The alder bark is a diuretic; the uva ursi is, also, a very excellent diuretic and tonic, almost equal to the queen of the meadow. Diuretics are of great importance, and you should

continue to use them for some time. I have given sweet spirits of nitre, with good effect. But you can put the most dependence on the diuretic power of the queen of the meadow—use it freely.

If the case is far advanced when you are called, there may be danger of gangrene. Then lose no time in applying the pyroxilic oil, both internally and externally. The dose is from three to six drops, which may be repeated every ten or fifteen minutes, until its effects set in. This is the most powerful antiseptic now known, and it should be constantly kept on hand.

After bathing the abdomen several times well with this, apply a cloth well-saturated with it.

You will find it necessary to vary the treatment, according to the urgency of the symptoms, but you must ever try to keep the termination to the surface. You can use this treatment without depleting the patient. If she seems to need an evacuent after this, you may give her some mild aperient, such as the neutralizing mixture, or you may use oil—linseed or sweet oil combined with some aromatic oil — generally, the neutralizing mixture is best. Dr. MORROW said, in the last lecture he ever gave on that subject, that in the course of twenty years' practice, he had never lost a case, and this is the course he pursued. Nor have I ever lost a case. I was once called to a case that had been treated by Dr. BALDRIDGE: she had been under his treatment for three or four weeks, and she expected to die, or, at least, remain down during the summer; but, by this treatment, I had her well in three days.

LECTURE XXXVIII.

MILK FEVER.

The secretion of milk generally takes place in an hour or two after confinement, but may be deferred from two to four days. If it does take place in an hour or two no disagreeable symptoms occur; but where it runs a day or two, we have constitutional disturbances. The reason why the milk is not secreted in such cases may be, that the system is in a deranged and morbid condition; and, hence, we find a great many persons afflicted with severe constitutional symptoms, usually within three or four days; it hardly runs over that time after confinement. The breast begins to swell and increase in size, and the veins on the surface of the breast enlarge very much. The breasts become sore, and the swelling extends under the arms, so as to prevent the patient from bringing her arm down to the body. More or less fever presents itself, and is, consequently, called milk fever. However, there is always a little feverish excitement during the first secretion of milk, but not generally enough to be noticed by the patient. Milk fever after confinement with a severe chill, is sometimes sufficient to produce a regular ague-shake, accompanied by severe headache and pain in the limbs, and all the symptoms indicative of regular attacks of fever. As the chill subsides, fever commences, the skin becomes, not unfrequently, very hot, pulse quick, frequent, and hard, the symptoms, in short, resemble, puerperal fever in many respects, and the case is liable to be mistaken for it; however, it can be distinguished from that disease by the fact, that in puerperal fever the breasts shrink

away; whereas in milk fever the breasts enlarge. In puerperal fever the lochia is suppressed, but it is not in milk fever. In the former the abdomen is very tender, in milk fever it is not. These signs in the one case, and their absence in the other, will always enable you to distinguish between them.

Also, if it is the milk fever, it passes off in a short time, generally spontaneously, with a profuse perspiration, which emits a very peculiar acrid smell. This is very profuse, and continues for a considerable time—milk then being secreted plentifully, the patient is generally relieved.

We are directed in the books, by the old school authorities, to bleed, give salts, oil, magnesia, and, by some, calomel and Dover's powders combined, especially where there is much headache and vascular excitement. This is unnecessary. The course I would recommend is much more simple. If the fever runs high, and continues over an hour or two, you should bathe the patient thoroughly in an alkaline bath, or with whisky, and rub the surface briskly—but not so much as to hurt the patient—and this should be repeated once in an hour or two, as long as fever continues. But it is, sometimes, necessary to give a thorough cathartic: the compound syrup of senna and cream of tartar is excellent; but I have lately used an infusion of senna, ammonia, and cream of tartar, or Epsom salts: take two drachms of senna, three of ammonia, and two of Epsom salts, or two of cream of tartar, to a half pint of boiling water; let it stand until it settles, and give the patient half a table-spoonful every half hour—continue this until it operates five or six times freely. When I practiced in the country, I used to keep a syrup of this kind on hand all the time. It will operate, generally, in the course of two hours, but you may continue to give it until it produces three operations. Use this, or something of a similar character, something that will not produce irritation of the stomach or bowels, and that will get through with its effects in a short time. This medicine will have completed its operations in two hours after giving it. As soon as the physic has operated, give diaphoretics. You need not expect to sweat the patient.

much, until you have evacuated the stomach and bowels. As a diaphoretic, you may use polygonum, the common smart-weed, in the form of a strong infusion made of the bruised plant, in cold water; or you may give it in the form of a tincture, in gin. This is both diuretic and diaphoretic; let this be given in doses of half a table-spoonful, from half an hour to an hour, in a strong infusion of pennyroyal. Give as much as the patient can take freely. A gill of the infusion to two drachms of the tincture, is a proper way to combine them. The infusion should be given as hot as the patient can take it—this will be stimulating, but no danger of producing fever.

The reason why we use the polygonum in gin is, that gin is more diuretic and less apt to produce an effect on the brain than alcohol. The only topical application which is necessary, is the bruised leaves of the *palma cristi*, or castor oil plant. These applied to the breasts are very effectual in bringing on the secretion of milk. They have been said to bring on a secretion even when there is no pregnancy or child-birth. Milk fever, as well as puerperal fever, sometimes seems to prevail as an epidemic, so that almost every lying-in patient will be effected with it. It is most apt to prevail in the spring of the year, and is rather contagious. You should observe some caution, after attending a patient with milk fever, to wash your hands and change your clothes before visiting another, even if you have only been feeling her pulse. The disease may go on and prostrate the patient very much, and may run into the puerperal fever, and the peritoneum finally become affected; but this is not very common.

SORE NIPPLES.

This though apparently a small affair, will not be found so in practice. It not unfrequently happens that women are very much afflicted with soreness of the nipples before confinement, and especially will this be the case before the first confinement; and, with some patients, it is so in every confinement. The nipples begin to be sore some weeks, or even months, before confinement,

and after confinement, the whole breast will become implicated, and will be so tender as not to admit of the nursing of the child. This, too, is frequently attended by considerable fever. If you are called to a case before confinement, you will generally be able to so far relieve her, that there will be no considerable difficulty afterwards. The best means I have ever made use of is a saturated solution of borax in brandy. Direct the patient to keep the nipples wet with this, or the nipples may be covered with cotton, and wet several times a day in the solution. Strong astringents have sometimes been used with good effect; say, an infusion of the marsh rosemary and geranium, or a tincture of these in brandy. This treatment is too apt to be neglected previous to confinement. But it may not come on till after confinement, and then, very frequently, commences with considerable fever: if this is the case, treat the fever just as you would milk fever—give a gentle cathartic, and poultice the breast with a common elm poultice, or apply warm fomentations to subdue the inflammation. It will be pretty soon subdued. But, although the inflammation is subdued, there will still be a great deal of soreness about the nipples. The common puff ball reduced to an impalpable powder, and applied to the nipple will soon relieve the soreness: it is good for any sore. But this will sometimes fail. You may also use the superfine flower of slippery elm with good effect; also a wash of the marsh rosemary. Stramonium leaves simmered in cream, have a good effect. A poultice made of lupuline or hops will succeed admirably. Sometimes an article will succeed in one, and not in another; or the same article will succeed in a patient at one time, and not at another. Pulverized stramonium leaves have been used to ease the pain, and have, occasionally, relieved it entirely. For the last two or three years, I have used another article, which, I am inclined to think, is better than anything else; it is, simply, the oil of the butter-nut. The kernels should be dry and warmed, and the oil pressed out, in the same manner that castor oil is extracted. A very small portion is required, and a day or two is sufficient to produce the desired effect. I used it in four or five cases, in this city.

with perfect success, and a great advantage in the use of this article is, that the child can nurse without its having to be washed off; while other substances must be removed. It lubricates the parts and makes them soft, and the child will take right hold and nurse; and the oil will not come off by nursing. If the soreness is very great, a poultice can be applied over it. I have succeeded in every case I have tried it in; and, so far as I know, it has succeeded in every case, in the hands of others. It is better than anything else I have ever used. I prescribed it in one case last summer, where the patient had been afflicted with sore breasts for some time, and it bore rather a suspicious appearance. This continued for a year, and the disease was so severe that she had weaned her child, which was only three months old; the disease having commenced before confinement. It was of a very bad character, but a simple application of that oil for a few days cured it entirely. Not being able to obtain the oil of the butter nut in this city, I have prescribed a substitute—the oil of the black walnut; but it has failed in a few cases, though it has acted well, in cases where other means failed. If you can think of it, when in the country, get some—an ounce or two will last a long time. A drachm will be sufficient for any one case, and you will hardly have more than sixteen cases in a year, and rarely ever as many, where the proper attention is paid before confinement.

LECTURE XXXIX.

I shall, in this lecture, recapitulate a considerable portion of what has been said heretofore on the subject of conception—those little difficulties, diseases, or derangements, which occur during utero-gestation, and which require more or less medication. I shall take up the various symptoms, as they generally occur in order of time.

MORNING SICKNESS.

If you are called in such a case, it may be that the patient is not aware of the cause; she may, hence, have been alarmed. If you are satisfied that the cause is pregnancy, you should inform her; or, if it is the first pregnancy, you had better inform her through some third person, and she will not be so frightened, and your medicine will have a better effect. You will, generally, be able to allay this by some alkali. The sickness generally comes on just after rising; then, let her take saleratus with mint water, before exercising any, after getting up in the morning. The dose may consist of twenty or thirty grains of saleratus dissolved in mint water, warm or cold, as she likes best. A few drops of the pyroxilic oil will generally relieve this unpleasant attendant of pregnancy. A very pleasant remedy is the effervescing draught, composed of some acid and soda, or acid and saleratus. Vinegar and saleratus, with an excess of the alkali, is as good as any thing else. This may be sweetened to make it more palatable. If you have not pure cider-vinegar, you had better use tartaric acid dissolved in water. The common

effervescing powders generally have too much acid, in proportion to the quantity of alkali, and do but little more good than cold water, as the design is to take into the stomach an alkali, to neutralize the acid there—therefore, you had better use two papers of the alkali to one of the acid. But if the sickness continues after this, you must, of course, do something more; an emetic then becomes necessary. This will generally give relief, at least for the time being. Let this be taken early in the morning, before the patient rises.

I have known used as a domestic remedy, and have used it myself, occasionally, with good effect, an infusion of the bark of the sycamore. It is very pleasant to take, and acts as a tonic and an anodyne. This is especially applicable where the patient is afflicted with nervous cough in the morning, and which terminates in sickness and vomiting. This will usually allay the sickness and prevent her from vomiting; (and it is, by the way, one of the best remedies for whooping-cough that we have.) I have prescribed it in many cases, with good success—yet in other cases it will not succeed. A cup of strong coffee, taken before rising in the morning, will frequently prevent the nausea.

However, if there is any biliary derangement, you need not expect to succeed, until you have corrected this by giving an emetic and cathartic, even if you should use the means I have mentioned for this sickness. The skin should also be attended to; the surface should be frequently bathed—as often as two or three times a week—with an alkali and whisky. This should be done in the evening, and in the morning washed off in cold water; but, in this, be careful you do not give the patient too great a shock. Be cautious about using shower baths, especially in the early stages of pregnancy—the shock produced may bring about serious consequences.

An infusion of German camomile has been recommended by good practitioners. As to its utility, I cannot say from my own experience; yet I feel justified in looking favorably upon it. It is tonic and anodyne. Dr. BALDRIGE used to recommend it, in connection with carbonate of magnesia and gum Arabic.

Where there is an irritable condition of the stomach with a good deal of heat; he recommended it combined with milk and water: pour boiling water on the articles, and then add the milk.

Hops have been used, and sometimes with good effect. Many of these articles will succeed, but the stomach and bowels must be arranged before you will succeed, for she must not be costive. However, it may not be necessary to give her cathartics all the time—but regulate her diet; let her drink a tumblerful of cold water before going to bed—this will generally prevent costiveness. Avoid catharticising if you can, especially active cathartics, after giving one or two.

H Y S T E R I A .

This is an attendant of pregnancy that is very common. I will not attempt to describe all the symptoms that characterize it, for it takes on all forms of disease imaginable. The patient may be of the fainting character, and this fainting may come on suddenly, but it is not generally very dangerous, and usually requires but little attention. Let the patient lie down: she will soon come to: give her cold water to drink, and throw some in her face. After she has fainted once, she will not be apt to faint again soon. If you are called in such a case, give her to understand that it is not a dangerous condition, and it will not continue long; but if she believes it is dangerous, it will be repeated, whenever she meets with a little disturbance. Some ladies are liable to faint at any time. Caution those about your patient to place her where she will not fall down—let her be placed on a sofa, lounge, or bed, and she will soon recover.

However, there are cases where fainting comes on and continues to an alarming extent, the patient appears to be dead. This condition requires attention. You may not get her to swallow anything; but ammonia will, sometimes, bring her to; if not, you must do something more. After inquiring into the symptoms, if you find that the patient is addicted to fainting, give an enema of the tincture of lobelia. This will arouse the patient

quickly, but it may require something stronger than this; then give the compound tincture of lobelia. Generally, however, the former will arouse her immediately. As soon as the patient is sufficiently aroused to swallow cold water, that will relieve her. They do not generally have a second fainting spell. Yet sometimes they faint a dozen times, right off. Where you have this condition, give stimulants: generally, however, cold water will be sufficient; but you should have a bottle of ammonia present, and apply it frequently—it will usually succeed. The best means for preventing a return of the fainting is, to use occasional emetics. If the ordinary means have been used, and still it returns, direct her to take a thorough emetic—as many as four or five doses; repeat the emetic a day or two after the first fainting spell has been relieved, and whenever the symptoms come on, and it will not be long before it will have entirely passed off. If she is costive, use the same means to relieve her that you would under ordinary circumstances; if necessary give a cathartic. There may be some organic disease which will bring about this. I am now speaking of the puerperal condition of the patient.

LECTURE XL.

HEADACHE.

This is another symptom that usually occurs during utero-gestation, and is generally caused by a deranged condition of the stomach and bowels. Dryness of the skin almost always accompanies headache, unless the headache arises from diseased teeth. If you are satisfied that it depends on a deranged condition of the stomach and bowels, give a cathartic, and have her bathed several times; keep the feet warm and give a cathartic. The common anti-bilious physic and cream of tartar, or the infusion, which I have frequently mentioned, of senna, ammonia and Epsom salts, or cream of tartar, instead of the Epsom salts, is proper; or you may use a syrup of these. One thing you should direct, to be careful about her diet, and not let her eat too much. She is liable to have a morbid appetite, and to eat more than she can digest, and the head sympathizes with the stomach, and brings on the headache. Especially should she eat light suppers. Also direct the patient to lie on her side, and not on her back, as the latter position causes too great a pressure on the arteries in the upper portion of the body. Be sure to keep the bowels freely open; for this purpose, Dr. BALDRIGE used to recommend a combination of sulphur and cream of tartar. This is very good under some circumstances, but you should be very careful about using sulphur, if she has any predisposition to pulmonary affection, disease of the lungs, or tuberculous affections; if so, you may be certain that you will injure your patient. Physicians are not generally careful enough about using sulphur in cases of pul-

monary diseases. Under other circumstances it is good medicine, but, no matter what other circumstances may be present, if there is tendency to tuberculous affections it should not be used. If the headache is so severe as to threaten apoplexy, repeat your cathartic, as often as once in five or six days. If this condition is threatened, it will return whenever any circumstance occurs to cause a sudden increase in the rapidity of the circulation, and rush of blood to the head. If the patient is of an apoplectic habit—stout, thick-set, with a large head and neck—you should exercise great caution with regard to diet. Have her take her meals regularly; or, if she goes too long without eating, and passes over the ordinary time of taking her meals, and becomes hungry, do not let her have as much, even, as if she had eaten at the proper time. Also, if she runs over the usual time of evacuating the bowels, she may have apoplexy. Therefore, you should caution her to be very regular as to her stools, and especially to avoid lying on her back. Keep her upright as much as possible; but when she does take a horizontal position, let it be on one side or the other. The pyroxilic oil will seldom fail to relieve the headache.

H E A R T - B U R N .

What is called heart-burn is a burning pain experienced in the stomach, and is, not unfrequently, a symptom attending pregnancy.

The stomach is in very strong sympathy with the uterus, and when the latter is in an irritable state, as is common in pregnancy, the stomach will sympathize with it, and will be very apt to get out of order. In persisting forms of this disease, gentle emetics are the best means to give permanent relief. These should be repeated as often as the symptoms return. They will not generally return under a week or ten days, and after being thus relieved a few times, will be still far less frequent in their recurrence. The pyroxilic oil will often relieve it, in a single dose.

Diet has a great deal to do with the health of the patient,

generally, but, in this case, this is more especially so. All coffee drinkers take this beverage too hot, and a great deal of the injury supposed to arise from the coffee itself, is owing to the great amount of caloric taken into the stomach. Drinking coffee or tea, or taking tobacco, may become second nature to a person, and though they are unnatural habits at first, yet persons become so habituated to their use that they will not influence the system very much. But when, with these habits, there are others still more mischievous, we will often find a necessity of entire change. Hot coffee is also quite injurious to the teeth, whereas, if taken cold it would, perhaps, be harmless in this respect.

The error of taking tea or coffee too hot may be corrected without any inconvenience, and this correction must be made if we would enjoy perfect health. The remedy does not require a discontinuance of the use of those articles, but only to stop taking them too hot.

To quit the use of these articles entirely, would, in many cases, prove not only inconvenient, but even mischievous. I honestly believe that my mother would die if she were to leave off taking her tea. She formerly drank it too hot, and, while she did this, it had a very unfavorable effect on her health; laterly, however, she has taken it comparatively cool, and soon after commencing to do so, she regained her health. I know many others who could relate the same experience. I have probably said more on this point than is necessary, but I want to impress on your minds the importance of avoiding hot tea and coffee, or hot diet of any kind; for it is a well-known fact that many persons drink their tea and coffee hot enough to scald their fingers, especially where they are boarding at home, and the coffee taken directly from the fire "*red hot*:" at hotels and large boarding-houses it is not so bad, where the coffee is drawn off sometime before it reaches the drinker; for in this case, it has some time to cool.

This heart-burn is really a stomach-burn. If you are satisfied that tea and coffee are injurious, you should have them diminish the heat, instead of leaving off tea or coffee altogether, for it is not well to change habits too suddenly, especially during

pregnancy. You may not be able to get the patient to take the emetics; if not, you must get along with the cathartics, and the other remedies. The pyroxilic oil will not fail to be beneficial.

It is generally supposed that the heart-burn arises from acid on the stomach, and, consequently, an alkali will relieve it; but in practice it frequently only aggravates the disease, and you will, perhaps, in a majority of cases find that an acid will palliate the difficulty—you cannot tell this until you try it. A little vinegar, or a piece of pickle will frequently stop the difficulty immediately. In connection with the cathartic, give bitters—the hydrastis is very superior. It should not be taken in spirits, however, but in substance or extract. The neutralizing powder is very good; this acts as a tonic and an acid.

CONSTIPATION.

This condition of the bowels, also called costiveness, is a very troublesome attendant of pregnancy. It does not seem to depend on any derangement of the digestive function, or of the liver. The patient has a good appetite, and the food seems to digest well, but still the patient is costive. Some would say, it is because she is in this peculiar condition, but still this does not yet explain the cause. You will be able to do much in some cases, by directing your patient to modify her diet, for, although this may not be really in fault, yet there is much difference in the kinds of food that are taken. Some tend much more to keep the bowels in a soluable state than others. Cold water, in the morning and at night, but especially in the morning, will be of very great service. Let her drink as much as possible. This may vomit her in the morning, but, if so, it will only be the better for her. Let her continue it. She will soon get over its sickening effects. In the beginning, give a cholagogue cathartic, but do not give them often; proper dieting and drinking cold water, as directed above, will generally succeed; but, if not, use aperients and enemas.

The patient will, very often, immediately after taking the sitz-bath, be able to evacuate the bowels. I have used this with good effect. As an aperient, the extract of dandelion made into pills, with half a grain of capsicum to each pill, and enough given at night, so that the bowels will be gently moved in the morning, will do finely. Adding a little anise seed will prevent griping. I have used the expressed juice of the black walnut; this you can find at any time in the country. To this, you may add anything you please, but it may be given alone. Give it in doses of ten grains, but some patients will not require so much; five grains will operate on me as a cathartic.

But, the constipation may depend on mechanical obstruction; it may be caused by prolapsus uteri. You must obviate this by the best means in your power. If the patient is on her feet most of the time, have her change her habits, and let her lie down a part of the day.

Even if there is no prolapsus, the uterus may press against the colon and thus obstruct the peristaltic action. In this case, direct her not to lie on her back, but on her sides.

LECTURE XLI.

TOOTHACHE.

Toothache is another difficulty which requires attention—and here let me tell you what you are not to do: do not *extract teeth* merely because they ache; but, if there is a diseased tooth in her head, no matter how far it is situated from the one that aches, take it out, and nine times out of ten, it will cure the other teeth which ache. A whole tier of teeth, or all on one side may ache, and depend on nothing but neuralgia. But this may, nevertheless, depend on a diseased tooth, and you may extract that one, whether it aches or not. But do not extract healthy teeth, because they ache. If the toothache arises from neuralgic affection, put a mustard plaster over the whole surface of the back of the neck, and that will relieve it for the time being; but, if it become chronic, it may require an irritating plaster. This condition does not, however, occur often.

Frequently the toothache depends on costiveness, or a deranged condition of the stomach and bowels. If you find this to be the case, you should go to work and regulate the stomach and bowels—have the patient to use light diet. It does not matter so much what kind of food the patient eats, as how much she eats; let her use a small quantity. But when I speak of food, I do not mean medicines, such as pepper, spices, ginger, etc., but wholesome, nutritious food. Let her eat light, simple meals. Keep the feet warm. You may frequently cure a case of the toothache by simply bathing the feet in warm water; or, if it depends on a neuralgic condition, put the feet and hands into hot water;

and, usually, the toothache will pass off immediately. See that the teeth are kept clean. You will find many a patient with diseased teeth; and then, a good dentist is the best prescription—who should extract diseased teeth, and clean the sound ones. But many persons say, they have their teeth ruined by having a dentist to cleanse them. This may be a just charge; but the mischief was done by cutting off the enamel. Such a dentist should be driven out of society. There is no necessity for thus injuring the teeth. I have had dentists to cleanse my teeth several times, and never discovered any evil result from it.

L O N G I N G .

Pregnant females generally know what this is. The poor creatures acquire a morbid desire for food which sometimes is quite unendurable; and it is remarkable that this longing bears no correspondence whatever to the usual habits of diet. The most eccentric tastes are evinced; often calling for things no person ought to eat. She may be a dyspeptic and desire to eat fat pork, which, under ordinary circumstances, would make her sick, but now it will set well on her stomach.

As said in a former lecture, this singular appetancy sometimes demands earthy substances, as clay, slate, or chalk, of which enormous quantities are eaten. Nor is this strange hankering confined to substances that she wishes to eat. She will take a notion to an article of clothing—a dress, or a bonnet—and have it she will, and that soon!

I have observed, also, that a woman in this way seldom longs for anything beyond her means of recovery. You will, of course, let her have what she wants. If she wants brandy, she will be perfectly miserable till she gets it; let her have it—it will not hurt her. She may take what, under ordinary circumstances, would make her drunk, and it will not affect her. She will soon be satisfied; and so with anything else. They are not always very particular about getting precisely the thing they wish, something as nearly like it as possible will often satisfy them.

However, they will sometimes desire to eat things that would be very injurious to them: when this is the case, tell them positively that they cannot have them. If you cannot dissuade them from such things as would be absolutely injurious to them—it is well to give them emetics. They alter the tone of the stomach, so that the appetite becomes changed. If they still desire improper things, let them eat parched corn. If the stomach is acid, give the neutralizing cordial—do not let them take too much chalk or charcoal, to absorb the acid. If you give any alkalies, you had better let them have saleratus; this is not very pleasant, but is the best they can take.

FALSE PAINS.

A very annoying companion of pregnancy is false pains, as they are called. These will generally be regulated by keeping the bowels open, and giving her anodynes. Keep her quiet, and the bowels in a healthy condition, and give her some anodyne-diaphoretic powders. An infusion of the poppy, or Kost's new anodyne, is a very excellent thing to allay these pains.

Where there is restlessness at night, towards the latter part of pregnancy, it is recommended to give an infusion of half an ounce of spikenard, half an ounce of cypripedium, a drachm of spearmint, and a drachm of anise seed, pulverized, and added to a pint of water. Have the patient drink this freely, from day to day, and it will allay this irritable condition immediately. Use this in the form of an infusion. You may increase the quantity, if there is a great deal of irritability and soreness about the abdomen.

The most reliable agency, however, is the new anodyne, in combination with camphor. The dose is, half a grain of the former to two grains of the latter.

WAKEFULNESS.

Wakefulness at night is a very exhausting habit that the pregnant woman suffers from. It frequently happens that the patient is unable to sleep for many nights in succession; her nervous

system thus becomes greatly debilitated. This is sometimes owing to the deranged condition of the stomach, liver, or skin; but is more frequently caused by the disturbance of the nervous system, received from the changes in her physiological condition. The formation of a new being in her body must, doubtless, effect the currents of the magnetic, as well as the electric, fluid.

An infusion of hops, or of the white poppy, will afford relief. Sleeping on a pillow made of hops, slightly moistened, has also been recommended. The anodyne preparation, mentioned for the false pains, is very good for this condition. Direct your patient to take regular exercise in the open air. Without this, you need not expect to do her much good. She should also be regular in all her habits of sleep and diet.

Lupuline given just before going to bed will be found very beneficial—but do not let her get in the habit of using opium to make her sleep; for you will have to continue increasing the quantity afterwards, or she will be worse than before. A cold bath taken just before going to bed is very good, if given in the proper manner. If the skin is much deranged, and in an unhealthy condition, she should have a good vapor bath. If the stomach is deranged, employ gentle emetics.

SWELLING OF THE LIMBS.

The pressure of the uterus upon the vessels in the pelvic region will interrupt the free return of the blood, and the inferior extremities thus become swollen, and present an edematous and dropsical condition. The veins become varicose and knotty, and will be much enlarged, and are of a very dark or black color.

Give occasional hydragogue cathartics, and pay attention to the surface. Bathe the legs with the pyroxilic oil, or, if this is not at hand, use a strong stimulating liniment. Bathing the feet in a strong infusion of hops is of great service, and, if this is alternated with a foot-bath of a decoction of oak-bark, it will be still more effectual. The patient should sit with the feet resting in a horizontal position, or on a line with the seat occupied.

When lying down, the side position is much better than that of the back. Keep the bowels in a regular and healthy condition, and do not allow her to become costive. Keep the skin, also, in a healthy condition by bathing. The cold hip-bath two or three times a day, seems to have an admirable effect in this case.

CRAMPS IN THE LEGS.

This is one of the most annoying difficulties that is met with in the course of gestation.

It is dependent, also, in part, upon the pressure of the uterus upon the pelvis. The nerves are, by this means, compressed, and we thus have a cause of the difficulty.

Often, however, cramp of the legs arises from a derangement of the stomach, incident to pregnancy. The employment of the anti-spasmodic tincture, as liniment, and also internally, in bad cases, will be remedial of this difficulty. Woolen clothing, worn next to the skin, is an important auxiliary to medicines. Tincture of caulauphyllum, taken three times a day, in tea-spoonful doses, is a good remedy. The vapor-bath will seldom fail of doing good service; but the skin must be well dried afterwards, and kept enveloped in flannels.

PALPITATION.

Palpitation is a distressing attendant of utero-gestation. This, most generally, depends on a dyspeptic condition of the stomach; especially an over-loaded condition—and you will find the best plan of relieving it, is to give emetics in the commencement. If, however, there is organic disease, powerful emetics may not be proper. You must look into this. If she has only had the symptoms in the puerperal condition, give an emetic. But, if the face is flushed, and there is evident irregularity of the heart's action, and rather a tendency to congestion to the head, give a sedative. You may give an emetic first, and afterwards a strong infusion of peach leaves. Some have recommended digitalis,

but I never use it. You should be careful about using such agents. You must be particular to keep the bowels in a regular, healthy condition. You should give cathartics when required. The infusion of the bark of the sycamore, mentioned before, is very valuable; use it freely every day, as long as the symptoms continue. Bathing of the surface is of great importance, and especially is the hip-bath. If the feet are cold, immerse them in hot water, or bathe them in tincture of capsicum.

A strong decoction, infusion, or syrup of the *viburnum prunifolium*, (black haw,) has an admirable effect to allay irritability of the heart. I have used, as a tonic and anodyne, a syrup made of a combination of the black cherry, sycamore, and black haw. These make an admirable tonic, containing, indeed, no sedative properties, still it is so combined that it produces an anodyne effect, allaying the irritability of the heart and nervous system. In making the syrup, do not expose the ingredients to too much heat, or the properties will be expelled. Pulverize them finely, and soak them for a time in alcohol, and then pour on boiling water, and let it stand until the strength is extracted. Many patients dislike to use the infusion, and you had better make it in the form of a syrup; they like that better, and think it is more like medicine.

The next disease we shall notice, is of more grave importance than those we have already described, which are rather matters of inconvenience to the patient, than dangerous diseases.

LECTURE XLII.

P H L E G M A S I A D O L E N S .

Milk leg, as this disease is commonly called, is a very troublesome, distressing, and dangerous affliction, particularly to the future health of the patient. As a general thing, it occurs between the fifth and ninth days after confinement, though, in some instances, it takes place immediately after confinement, and in others does not commence until several weeks. It is called milk-leg from its peculiar, white appearance, and its seat being in the leg; but it sometimes occurs in the upper part of the body, and in these cases, is very apt to prove fatal. The first symptom that generally presents itself, is an aching pain in the region of the thigh; it may commence at the end of the great toe, in the hip, or the foot; but presently it is felt in the calf of the leg: fever sets in, and assumes a hectic form; the limbs swell, commencing at the foot, and gradually rising to the body, until the limb is swollen as large as it can hold, and is white like milk. The limb will be so tender that she cannot bear the weight of the bed-clothes, or to have it moved a particle. The bowels are costive; but diarrhea generally occurs towards the latter stage of the disease. She sometimes has chills, alternating with fever. It eventually runs into a chronic condition—the limb becomes less painful, and more susceptible of being moved; but the swelling remains and the leg continues sore, and, eventually, ulcers will appear on the ankle or in the skin elsewhere; this condition will remain obstinate for an indefinite period. I have known patients to continue in this condition for years, if the constitution did not sink

under the treatment of the Old School, which is in the acute stage, frequent bleeding and leeching, local and general—though DEWEES deprecates bleeding in this case, yet most authors recommend the free use of the lancet. The reason why the disease comes on is, that the patient is in an anemic condition, and the re-active powers very weak. Magnesia is recommended by the Old School, and the tincture of tartarized antimony, either in wine or dilute alcohol. Of the tincture of antimony as much is taken as the stomach will bear.

Another preparation is recommended, of ipecac and calomel three grains, nitrate of potash one drachm, divided into eight doses, and given every two hours. This is good Old School treatment, if we leave out the calomel and substitute podophyllin, of which, use one grain. Well, this is not the course of treatment which we pursue, and I would remark here, that the course pursued by the Old School is notoriously unsuccessful. You will find cases in this city and elsewhere, where their patients have remained for years under their treatment, at death's door, incapable of moving about. Many of them die under this treatment. I have had the misfortune, or good fortune, to treat a good many cases of this kind and have been successful, and so may you be by following the proper course:

First, then, as soon as the symptoms make their appearance, give a thorough cathartic of a hydragogue and cholagogue character, that will operate in a short time. I have usually given a combination of podophyllin and cream of tartar; laterly, I have used podophyllin, given till it operates thoroughly five or six times. Before it has operated, wrap the limb in flannel, wrung out in some stimulating infusion, such as mustard-water, or brandy and capsicum—wrap the limb from the toes to the body. If the patient's stomach is irritable, give an emetic. Cover the mustard-water wrapping with a dry cloth, so as to prevent evaporation. Bathe the body thoroughly in some stimulating bath, and get up a perspiration. You can not, however, do much till the cathartic has operated; then, if she can get up, give her the alcoholic sweat, or, if she is unable to get up, elevate the clothes

and let a vapor enter into the bed through a tube, or apply steaming bricks. Give her a steam infusion of chamomile with the smartweed. These are diuretic and diaphoretic, and you need a diuretic action; the kidneys have a great deal to do with this case. The secretion of milk may not have commenced—if not, this will bring it about. Let her drink as much as possible of the infusion, and, as soon as she begins to sweat a little, add the sudorific tincture that I recommended before, substituting for the opium the new anodyne (Dr. Kost's.) It does not produce the dangerous narcotic effect on the brain that opium does. Give a teaspoonful of that preparation, repeated as often as once in half an hour, then once in an hour; sweat her freely, and continue it for ten or twelve hours. Allow her to drink cold water—she will sweat the more freely. After having used flannel cloths, you may change them for bitter herb fomentations—take hops and lobelia. Apply them all over the limb; but sometimes the warm applications do not seem to succeed, and the soreness will still continue; if it does not allay the soreness at once, change for cold applications of salt and vinegar. After having evacuated the bowels thoroughly, you need not repeat the cathartic; but continue to give small portions of cream of tartar, to keep the bowels open. Continue to give diaphoretics. Ipecac or lobelia, with nitrate of potash, will keep the surface moist. I saw it tried in a very bad case, where it allayed the pain, but the swelling continued—nor will the swelling subside under any treatment other than the one I gave you. In many cases, I have used it with marked success. The swelling will not subside, in many cases, under three or four weeks; but if the treatment is commenced early, it will subside in the course of from three to five days, so as to disappear entirely. But it is very apt to become chronic, especially if you are not called until the limb is very much swollen; although you may relieve her from pain, yet the limb will remain swollen and sore, and there will be a tendency to ulcers below the ankle. But you may not be called until it has become chronic, and it may have become hardened until it feels as hard, almost, as bone—the skin will be tense, and the surface of the limb callous, with

running ulcers over it—the limb cold and death-like, looking like the limb of a corpse. In such a case, you must treat the ulcers as you would any other chronic ulcers. Give our common alterative syrup; bathe the whole surface in alkali at night, and two or three times a week with cold water, using brisk friction in the morning. If the ulcers are irritable, they should be poulticed with cooling applications; but if they are hard and callous around the edges, scarify with potash and apply stimulating liniment to the whole limb. It will not be long before the ulcers will heal. If there is any fungus, apply caustic potash—carbonate of potash will generally answer—apply till the ulcers assume the ordinary form, and treat them as common ulcers.

The bandage is a most important part of the treatment. If the swelling has somewhat subsided, and the skin become flabby, apply astringents and use, internally, alterative medicines. It will be found necessary, also, to operate on the patient's bowels, in the chronic form of the disease, and this may take several days, but you may apply the bandage in the start.

A large amount of fluid is absorbed through the limbs and carried into the circulation, causing a feverish condition with sickness, headache, etc., and, if allowed to go on, she will be thrown into a violent fever. Use an active hydragogue cathartic composed of podophyllin, jalap, and cream of tartar; or senna, manna, and cream of tartar, until the bowels are freely evacuated several times. It will relieve her, and should be repeated as long as the swelling continues—till all appearance of constitutional disturbance has subsided. So far as the ulcer is concerned, it should be treated upon the same principle as you treat chronic ulcers under other circumstances. These cases are no more incurable than any other ulcers upon the limbs, provided the proper attention is paid to the general system.

LECTURE XLIII.

PROLAPSUS UTERI.

“Falling of the womb,” is the common name for this difficulty. There may or may not be retroversion. What is meant by retroversion, is where the womb is settled down into the cavity of the pelvis, and the fundus tilted over backwards, and becomes fixed below the projection of the sacrum. It is called simply prolapsus, where it occupies a natural position parallel with the axis of the superior strait, the fundus remaining above the body; but in the other case, the neck is raised up and presses against the urethra, while the fundus settles down in the hollow of the sacrum. In this case, it may be necessary to use some apparatus to elevate the uterus, in the cure of retroversion, and this may be a difficult task; though in most cases not so, unless adhesion has taken place; and if it has, it is impossible to raise it. The symptoms are, a bearing down sensation in the region of the pelvis, a feeling of uneasiness and terseness in the broad ligaments, a sensation of drawing from one side, from the superior interior region of the spine, obliquely into the pelvis. If there is retroversion, there is also suppression of the urine, and after a while soreness, so that the passage of urine causes smarting. There is a drawing, aching pain in the pubic region, as well as in the iliac region. The pain very frequently extends down into the thighs and knees, and even to the bottoms of the feet, where it causes a prickling sensation. If you have these symptoms, connected with the suppression of the urine, you may be very certain that there is retroversion of the uterus; but if you have all

the other symptoms, without the suppression of urine, there may still be no retroversion.

But, in fact, it can only be known positively by touching, and, before you do anything for it, you must make an examination, and ascertain the exact position of the parts, and know whether there is morbid adhesion or not; for if you can elevate the uterus, there is no adhesion, and if you cannot raise it, there is; if so, tell them that it is an incurable condition.

There is, not unfrequently, nausea and vomiting attending the condition, with great difficulty of walking and weakness in the small of the back. If the uterus is very low down she cannot walk without difficulty, and may be even confined to her bed. Hysterics are frequently connected with this condition, though not necessarily so. You may ask the patient if she has falling of the womb, and if she knows it, she will say so; but you should never rest satisfied with the information you get from her. Determine to make an examination yourself and inform her that it is necessary, and if she will not submit, let her get some one else, that is willing to grope his way in the dark. But if she is willing, make an examination.

Having satisfied yourself that there is retroversion, endeavor to elevate it, by placing the fingers under the uterus, back next to the rectum, and push up gradually, having the hips of the patient elevated considerably, so as to relax the muscles of the abdomen. At the same time, apply the another hand, so that you may support with one, while you examine with the other, and so manipulate as the case requires. You can generally succeed in elevating it, if there is no adhesion, and yet you may not; there may be too much obstruction in the rectum, owing to the fact that she has been costive for some time, and the rectum, by the collections of fecal matter, has become preternaturally enlarged, and if you attempt to elevate, you push against the rectum. If this is the case, you must use means to completely evacuate the rectum. It may be necessary for her to rest on her hands and knees, so that you can introduce your fingers into the rectum, and thus force up the uterus. Use

considerable force, if necessary, unless it is inflamed or is painful. Should you find adhesions, it must remain, and you must palliate the symptoms as best you can. But if you are so fortunate as to succeed in elevating it to its proper position, direct the patient to keep quiet for a day or two. It may be necessary to use a truss, but these are often mischievous things. They are a source of more disease than prolapsus itself. Better use a soft sponge, and be careful to have it removed and cleansed every day. The truss debilitates the parts, and makes the matter worse—they may be used for a very short time with advantage, but I have never known a case where they were worn for several months, but that it became necessary to wear them all the time. The best mechanical means—if mechanical it may be called—is the cold sitz-bath, or a cold wet bandage with a dry cloth outside of it. It need not be worn all the time, but for an hour or two. The sitz-bath should be taken as often as three times a day, and cold water should be injected into the vagina. If there is suppression of the menses, at the same time, use the proper treatment for that. You may use injections of saleratus, cold or cool, three times a day. The patient should remain in a recumbent position as much as possible. After a week or so, a decoction of geranium and white-oak bark may be used, combined with golden seal. At the same time, the patient should use a strengthening-plaster applied to the lumbar region, and it is a very good practice to apply a strengthening-plaster in front, from one side to the other. Let it be made up like BEACH's strengthening-plaster, and spread out thin on a piece of soft leather, and apply it. The patient's stomach and bowels should be attended to and regulated. They are generally affected with dyspepsia or liver complaint: they have pains in the stomach and region of the liver, and through all parts of the body; and, in fact, it is hard to tell what ails them. Use such means as will palliate the dyspepsia. A specific remedy, and one on which we have relied for a long time, and which I am loth to give up, is Naphtha.* Use this every day

* The Pyroxilic Oil will answer better in this place.

until it produces its constitutional effects. If you use naphtha, continue it steadily until it gives relief, and do not use any other internal remedies at the same time.

You may give a syrup or strong infusion of the macrotrys, unicorn, and beth root, especially if there be leucorrhea. Dr. MORROW was in the habit of using the macrotrys internally to produce constitutional effects, while using injections of the macrotrys and geranium.

He was in the habit of recommending this treatment with great confidence, and, in the hundreds of cases he treated, he never lost one. I have frequently heard him say, that he could cure every case with the macrotrys alone, but he thought he got along better by using the others in conjunction. You should bathe the patient's whole surface, especially in the alkaline bath. Whatever you do, throw the instruments to the dogs, and do not use them at farthest more than a few days, in case of recent prolapsus, from which the system will soon recover. But if they are used long, they will do more harm than good. I defy you to show me a case where they have been used with success, but, on the other hand, the patient has been getting worse while wearing them. If they are cured, it is not by the instruments. I have known many individuals to use the instruments for awhile, and when they took them off again, could not walk without them. My experience is now decidedly against the use of instruments. When I first saw trusses, and saw the testimony in favor of their use, I was inclined to think that they might have a good effect, but I was disappointed, and I would advise you to discard them altogether. You had better rely on your medical treatment.

It may sometimes require five or six months to cure a case, or you may succeed in a few weeks, or days. In chronic cases, do not oblige your patient to avoid exercise altogether, but do not allow her to run up and down stairs, or ride on horseback; yet she should take as much exercise as is convenient, during the treatment. She should avoid *hot* tea and coffee, especially hot coffee.

The strengthening-plaster should be applied over the lumbar region, the sacral region, and over the hypogastric regions. A plaster made of the extract of white oak bark, with some adhesive substance with it, has a most admirable effect. I have combined this with the extract of the red beech, and this makes the best strengthening-plaster used.

LECTURE XLIV.

DYSMENORRHEA.

Now, it is a fact, that, in civilized society, nearly all cases of menstruation are, to some extent, painful, though not generally so much so as to require medical treatment; and I believe, that this painful condition in the exercise of a natural function is a morbid condition, not necessarily so, but made so by the violations of our physical laws which exist, to great extent, in our present state of society.

The cause of the mischief is much in dress, diet, and exercise; violations of the proper rules which should govern all of us in these things. Generally speaking, where there is dysmenorrhea, there is more or less general derangement. This may have arisen from the dysmenorrhea, or it may have been the cause of dysmenorrhea. I believe that this bad health is more frequently the cause of the dysmenorrhea, than the reverse. Writers have divided the causes into *general* and *local*: general is that to which I have just referred—derangement of the general system; a local cause is where there is some deformity of the uterus. Owing to some cause, not well understood, there is, occasionally, a coagula which obstructs the free passage of the menses, and this obstruction gives pain. This is ascertained by the fact, that lumps of coagula come away, and whenever this ceases, the pain ceases; while, just before they have passed off, the pain is most severe. But there is, probably, a cause antecedent to this—that is, the rigidity of the os uteri, it being so firmly closed that the menstrual discharge is prevented from passing off. When there

is this obstruction, there will be considerable accumulation of the menses before the os uteri will give way, and allow the discharge to pass off easily.

Some patients have good health at all times except during this period—the ill health seeming to be brought about by this pain. When there is general good health, it is not apt to require complicated treatment—when I speak of good health, I mean the absence of organic disease of the uterus, or other parts. There is sometimes a membrane formed inside the uterus, which prevents the menses from passing off. There are various opinions with regard to the origin of this membrane; some think it is the result of former pregnancy, and that it is the decidua—the germ having been absorbed, and the decidua having closed the os uteri. The menses will collect behind the sack or membrane; or it may be prevented from secreting at all, and, at each month or period cause extreme pain and plethora.

Sometimes we have periodical nose bleeding mentioned in the books, or we have hemorrhage of the lungs, or of the stomach; and this circumstance is taken advantage of, to prove the doctrine that the menses is true blood, by those who believe it; for it appears to be blood from the nose, at the time of the menses, or from any other part of the body. The patient will have these vicarious discharges, and afterwards feel relieved, as in the case of menstruation. But, invariably, at these times, there is a great deal of pain in the uterus, and there may be a little discharge, or not, in connection with this vicarious hemorrhage. Frequently, where there is an obstruction, either in consequence of coagula or spasmodic contraction of the os uteri, or a permanent closure, there will be great pain, not only during the leucorrhœal discharge, but, at other times than the menstrual period.

A scirrhus condition of the uterus will cause pain at every menstrual period: from this, we judge that there will be menses, but, in this case, it will generally be more of the character of hemorrhage. It may be scanty, indeed, in the scirrhus condition of the uterus. Perhaps the most frequent cause of painful menstruation is, a very small os uteri and a rigid condition. It is,

sometimes, so very small that the flow cannot pass off as fast as it accumulates. There is, at this time, a great deal of sensibility in the uterus, while, at other times, there is less sensibility in the womb than any other part of the muscular system. It may be large enough, were it relaxed, but, being rigid, it retains the fluid. It may be closed entirely, by having adhesions from inflammation. Though such adhesions are generally easily relieved.

The treatment which I would recommend, in most cases, is very simple. In a recent case where the patient has formerly had no difficulty of this kind, it generally requires nothing more than a pretty active cathartic, and keeping the bowels in a regular condition by mild aperients, for some time. Drinking cold water, or enemas of the same, is excellent. If the patient has never had any difficulty before, it is evidence that her general system is deranged, and your cathartics will have the desired effect. Give one once or twice a week, with some alterative doses; just enough to keep the bowels a little loose. Our common alterative syrup answers a very admirable purpose. The *macrotrys*, or *botrophys racemosa*, is most relied upon by Prof. Kost, in dysmenorrhea. But I would recommend with this, the *Leonurus Cardiaca*, or motherwort—very properly named—and this is a remedy as old as the science of medicine. I was favorably struck with the name, in examining an old work by GALEN, translated from the Greek more than a thousand years ago, and published in England more than three hundred years since. The motherwort was recommended therein for this very purpose; but it has remained almost unnoticed for a long time. It is frequently trodden under our feet, and is very abundant, and I believe, that nature had the design of furnishing us beneficently, in producing so abundant a supply. It is one of the best anodyne and alterative tonics I know of. It grows everywhere in the temperate climates, and may be used in the form of an infusion, an extract, or a syrup; the last is preferable. I have used it alone, with excellent effect, in recent cases; or it may be used combined with the alterative syrup; and then, alternate with the restorative bitters. Now, this treatment, with occasional

cathartics, and paying strict attention to the surface, in any common cases will generally effect a cure. I speak now of the treatment of a recent case.

If it is a case of long standing—and you should always be very particular in your prognosis—you should inquire into the cause, and ascertain, if possible, if she has ever been in a condition to be free from pain at this period, so as to determine whether she has any organic derangement; that is, partial closure of the uterus. It may be in consequence of an imperforate hymen, and the menstrual fluid may be retained behind it; if so, rupture the hymen.

If the dysmenorrhea arises from derangement of the other portions of the system, take her through a thorough course of medicine—emetics followed by the vapor bath. Alternate this, if necessary, with cathartics, and then the alkaline wash; pay strict attention to the skin, so as to equalize the circulation; and two or three days before the menstrual period, give an emetic, and follow this by a strong infusion of the macrotrys, or black cohosh—this should be carried to the extent of effecting the head so as to occasion slight vertigo. The emetic should operate in an hour or two, and in an hour or two, in bad cases, give a cathartic, such as I have mentioned before. Cathartics will not debilitate the patient, if they are not continued too long; a cathartic that operates quickly is soon through with its effects. The amount of evacuation from a patient, by jalap and cream of tartar, will not debilitate the patient half as much as if produced by podophyllin given slowly; because the latter continues its effects so much longer. After having evacuated the patient's bowels, wait ten or twelve hours before the time for the menses to come on, and apply the extract of belladonna to the os uteri, and continue it until the time, employing the vapor bath just at the time. If there is rigidity, the belladonna will do a great deal of good; or, if there is closure, it will enable you to operate more easily. I know of no local remedy as good as this. The diaphoretic powders are used by our practitioners with good effect; they should be combined with capsicum, of about three grain doses,

repeated once every hour: do not add any more capsicum. As an anodyne, I am pleased with the extract of the lactuca, and I have lately been in the habit of using that, in connection with myrrh, so as to give about five grains of the extract, at a dose, to half a drachm of the tincture of myrrh, and it has an admirable effect. Myrrh is a fine anodyne, and also an emmenagogue, and we need an emmenagogue in this case. If there is much hemorrhage during this period, you ought to give an alterative preparation, between times, all the time, composed of equal parts of trillium, helonias, and myrica cerifera; you may add to this, to make it more an anodyne, half a grain of Kost's anodyne, to each dose. Or, as a substitute for this preparation, equal parts of the trillium, macrotrys, and cypripedium, and use in the form of a strong syrup. This preparation you will find in the little pharmacy, published in my work on Surgery. Give her about four ounces of the syrup at a dose, and continue this for the whole month, and, if there is pain then, give it more freely, as well as the other anodynes I have mentioned, and apply the extract of belladonna locally; it will not do to give belladonna, internally. My former partner, Dr. HUNT, and who is one of the best practitioners living, used to think a great deal of the actea alba, the white cohosh, in the form of an infusion; and there is no doubt of its being an excellent remedy—any thing from him, with his experience, may be relied on. The macrotrys, or black cohosh, is considered by my friend, Prof. Kost, as being one of our best emmenagogues, but I am more in favor of the white cohosh—actea alba—it possesses more of the anodyne properties.

That compound, which I mentioned in my last lecture, has an admirable effect; but use the syrup which I have just given you, as it is preferable. Yet, it may be that you can not get these articles; then you must use something else. Every practitioner should have several resources, so that he will not always be confined to one thing: and when I speak of an article, I suppose that you are acquainted with materia medica, as taught from this desk by the professor of that department. Always try and have

something that will answer the purpose. You may substitute one article for another of the same class: see emmenagogues in "Kost's Materia Medica."

The article I mentioned in my last lecture, the sycamore, is a very fine anodyne, if the symptoms require that. You must not prescribe for one particular disease alone; if she is dyspeptic, or is troubled with chronic dysentery, or chronic diarrhea, or any thing else, you must prescribe for all. Her condition depends on associated derangements, and you must endeavor to remove them all, and while you are making local applications for local difficulties, you give medicines internally for other derangements. If she has a great deal of pain during the time, you may apply bitter herb fomentations to the parts; but I have never yet failed to relieve by extract of belladonna, even after pain is in existence; yet you may fail. Give the new anodyne internally, while the pain is severe. Where there is rigidity, you can do a great deal by warm fomentations, or hip-baths; while you use the alteratives, do not neglect a very important means—the cold hip-bath—and, if she is troubled with pains, use cold wet bandages. If there is a scirrhus condition of the uterus, which you must ascertain by making an examination, treat her for this. It will be necessary then to make your applications to the uterus, by injecting into the cavity of the uterus. If the flow is not very free, and you notice that there are coagulated lumps passing off occasionally, and you presume that this is the cause of the pain, you will do well to apply the fomentations. But there is probably a cause antecedent to this: rigidity of the os tincæ, or too small a passage. You may aid the flow by introducing a catheter, and throwing into the uterus some warm water, or a stimulating injection. The *Jeffersonia diphyllum* has a good effect; you may combine this with the *hydrastis*, or you may use *sanguinarium* and *macrotrys*. It was recommended, last year, to use a still more stimulating injection. I have used strong soapsuds and brandy, and, although there is a sense of burning, this will relieve it generally. If there is a scirrhus condition of the uterus, you will have to use caustics—such as carbonate of potash. In

scirrhus states, an injection of a decoction of the hydrastis, with some of the new anodyne, will be the chief remedy. If there is any inflammation, as is occasionally the case, you must use soothing applications—injections of slippery elm: use a very thick mucilage, and inject it, first, into the cavity of the uterus, and then fill the whole cavity of the vagina with it, and then apply a slippery elm poultice over the pudendum. Use means internally to allay the inflammation. Lupuline has an admirable effect. I have not much confidence in hyoscyamus—which is improperly used by some reformers. But the lupuline will be beneficial; repeat it once an hour, till you have given thirty to forty grains. It has an anodyne effect, and relieves the patient of a good deal of pain.

If the os uteri is too small, or seems to be rigid, or if there is a closure, and the pain arises in consequence of this, which you will know by examining, you must enlarge it, by mechanical means. Try extract of belladonna first; but, if this fails, dilate by injecting some of the infusion of belladonna through a catheter; but do not have it too strong, and inject but a little at a time, lest you may do harm. Let your catheter remain for awhile, so that the infusion may run out through it, and not come in contact with other parts. Use a larger catheter the next day, and continue this for a week or two; in the course of a few weeks the mouth of the uterus will be large enough.

You should inform the patient of the condition, and what is necessary to be done, and how long the applications should be continued; and be sure to set the time far enough ahead, even farther than you suppose it will be necessary.

Tell the patient or nurse how to apply it—some patients can apply it themselves. Wait then for the time, and if the pain returns, without the discharge, continue it longer. It may require much patience, on the part of the patient.

Constitutional treatment may be necessary for several months, or, if it is a scirrhus condition, or a chronic inflamed condition of the womb, it will require from three to twelve months to relieve her.

LECTURE XLV.

LEUCORRHEA.

This affection, also called "whites," and "flour albus," or "white flows," is a very common disease, in this country, among women. It is generally known under the term "*whites*," and in speaking to women on the subject, you should use this term.

It is a discharge from the genital organs—from the vagina or uterus, usually white, but sometimes colored. It may come from the walls of the vagina, or the walls of the fundus of the uterus, or from both. In the early stage, it is almost always white, but, if it continues for a long time, it frequently changes to a dark, cloudy-greenish or yellowish color. It is said, when it comes from the cervix, or neck of the uterus—it is tenacious and tough, somewhat resembling the white of an egg. This discharge is generally intermittent, coming away in paroxysms. When it comes from the body of the uterus, it is of a dark-greenish color. The quantity is sometimes much increased, and has a fetid odor, and is connected, more or less, with an indurated condition of the uterus, or inflammation of the internal surface of the uterus. When it comes entirely from the walls of the vagina, it is, at first, white and profuse, but if continued for a long time, it becomes greenish and dark, and sometimes slightly tinged with blood; but is not fetid unless there is some ulceration. It always begins by a white discharge, increases in quantity, and changes in color.

The causes are very various. It frequently depends on general debility of the system. I would remark, that, if there is a

scirrhus condition of the uterus, and which is also attended by this discharge, it will be discovered in the discharge, by the appearance of small granulated substances, with flocculi, and that if these do not occur there is no scirrhus disease. The cause may arise from the prostration following difficult and tedious labors, or injury done by the use of instruments—particularly by instruments used in prolapsus. A very common cause of leucorrhœa, is the excessive use of tea and coffee, especially coffee; and I have frequently relieved patients by simply having them quit the use of tea and coffee.

Polypus of the uterus will, invariably, produce leucorrhœa; so will the use of highly stimulating food, pepper, spice, and drinking wine. Where it depends on this cause, the discharge soon becomes of a green color, with flocculi resembling the white of eggs.

The ocular symptoms, are general paleness and corpse-like appearance of the countenance, and a puffy, bloated appearance; you can easily distinguish between it and a healthy countenance. There is, frequently, a dropsical condition present, but not always so. The eyes have a wan, sorrowful, and heavy appearance, and though she has been heretofore lively and cheerful, and now tries to appear so, yet, the countenance will still betray her—*poor thing!* The sight is generally weakened: sighing, lassitude, and general weakness are permanent symptoms. There is, usually, more or less palpitation. If the disease becomes very severe, the discharge will be fetid, even if there is no organic disease.

As the disease continues and becomes very severe, hectic fever comes on, and, if the patient is any way predisposed to pulmonary disease, the lungs become affected; or, general emaciation, nervous debility, depression, and, finally, death may follow. It need not be supposed that this disease is not dangerous—true, the patient may drag out a long life under its influence; but the general debility which it produces, renders her much more liable to other attacks of disease, than if she were in a healthy condition. Persons suffering from leucorrhœa are generally barren.

The physical symptoms are, a sense of uneasiness in the pelvis, with slight bearing down pain, even if there is no prolapsus.

There will sometimes be darting pains, and a prickling sensation in the bottoms of the feet. Headache is a common symptom, with a more or less dyspeptic condition; also, an irregular state of the bowels, which are generally costive; nervous irritability, and restlessness at night, with spinal irritation; a variable appetite, sometimes being voracious, and then deficient. She generally has a morbidly depraved appetite, and is disposed to eat unnatural substances, such as charcoal, chalk, soapstone, slate pencils, soot, etc. Having this symptom present, of course, it will be certain that there is a discharge; then, that should be inquired into, as to its particular nature, in order to ascertain the extent of the disease.

The treatment in ordinary cases where the discharge is slight, is, to bathe the surface, and also let her take the cold hip-bath, and inject cold water into the vagina; and follow this by some simple astringent, such as the geranium, marsh rosemary, or white oak. This will generally cure it; if not, after continuing for sometime, give the alterative syrup, in connection with the restorative bitters: and it requires more active local applications; bathe her in an alkaline solution, once or twice a week, at night, and in cold water in the morning. Apply, locally, a decoction of hydrastis and geranium, or a saturated solution of borax and saleratus; and if you want it still more stimulating, add sanguinaria, but do not make it strong enough to produce irritation and smarting. This, with the bathing, is generally sufficient, but may fail. Then, instead of the alterative syrup, use an infusion of trillium, helonias, and macrotrys—equal parts of these.

Dr. MORROW used these a great deal, and with great success, to the extent even of producing the constitutional effects of the macrotrys. Latterly, I have used the macrotine, in connection with other articles. If the patient is costive, the best cathartic or aperient is podophyllin. Give this, in connection with cream of tartar, one grain of the podophyllin to half a drachm of cream of tartar, triturated together—give in two or three doses. If this is not sufficient, increase the quantity. If you should wish to give a cathartic dose, give this once in three hours; as an

aperient, a quarter of a grain of podophyllin to from ten to thirty grains of cream of tartar, is sufficient. The podophyllin seems to have a specific effect; it is an emmenagogue.

If the stomach is deranged, it is well to give an emetic. I have used, considerably, BEACH's diuretic drops, leaving out the turpentine, and using in its place the essence or oil of juniper—it does not make much difference. Use that, in doses of about half a drachm to a drachm, several times a day.

If the discharge is simply from the vagina, this course of treatment will, almost invariably, relieve it; but if it is from the body of the uterus, it will be necessary to introduce the medical infusion by injection into the cavity of the uterus with a syringe, having a pipe to introduce into the os uteri, or by a small catheter. You may use the same injection of borax and saleratus. I have used podophyllin, but, if you use this, it may produce smarting, while borax will not cause smarting. The injection will benefit the patient a great deal. You may use geranium, but I have not so much confidence in the astringent, but prefer something that will produce stimulation. Yet others have been much in favor of the stimulants and astringents combined. For this purpose, THOMPSON'S Composition Powders, infused in boiling water, will make a good injection. It should be employed weak enough not to cause too much smarting. You will commence with it weak, and gradually increase the strength. If it still seems to be obstinate, and the symptoms indicate chronic inflammation, you must use a strong alkaline solution. Begin with a strong solution of saleratus alone, then use something stronger. Carbonate of potash, or vegetable caustic, alternated with an astringent—the marsh rosemary or geranium—use, at the same time, the alterative syrup or bitters.

If there be dyspepsia, the alterative bitters will answer a good purpose, but if there is derangement of the liver, you will have to depend on podophyllin. The infusion of trillium, to which you may add, with good effect, the cypripedium, which has a good effect on the nervous system, may be a good adjunct to the remedies directed for the difficulty with the liver.

It will often be well, when we have to use medicines for a long time, as in these cases, to change one article for another of the same class—thus, you may leave out the trillium, and use, in its stead, the helonias. For example of substitutes, see KOST's *Materia Medica*.

The patient will become so accustomed to one thing, that it will have no effect on her. If you use the macrotrys, the patient will, finally, become accustomed to it, so that no effect will be produced; but, by changing to the trillium, the effect is continued. As an injection into the vagina and uterus, I have used *Jeffersonia diphyllum*—it is a powerfully pungent article. Use it weak at first, in the form of an infusion, and gradually increase the strength if necessary.

This will generally stop the discharge immediately, but not permanently. I would recommend that very article as an injection for this purpose; but you must be very cautious not to have it too strong in the beginning. It will arrest immediately, but is only palliative; the patient's other symptoms must be attended to, by the use of the proper means. She should avoid hot drinks, and spices. She need not deny herself of meat, but may eat any wholesome, nutritious food. Very generally, when you are called upon in such case, by directing the patient in the first place, to bathe in cold water, with the hand-bath, and have her adopt a proper diet, you may succeed in many cases without resorting to medicines.

I differ with many of my professional brethren, in regard to the advantage of flesh-brushes. I think, that in many cases, they are pernicious. I have seen persons covered with pimples as large as goose-pimples, from using the flesh-brush, and they were still using it, to get rid of them. I know that flesh-brushes are highly recommended by a great many good practitioners; but they have not watched their effects, as I have. I wish to call your attention to this matter, and if you do not find me right in this matter, do not follow my directions.

LECTURE XLVI.

SUPPRESSED MENSTRUATION.

A distinction is made in some of the books between cases where the menses have appeared and afterwards been suppressed, and where they have never appeared, and which is called amenorrhea. Where it has appeared and then suppressed, it is called *suppressio mensium*, and where it has never occurred it is called *emansio mensium*.

Amenorrhea implies the latter, and signifies the non-appearance of the menses. I will first speak of it in the recent acute form, to which I have already referred in another place; and this form is more violent and painful than the chronic. When suppressed suddenly from cold, there is more or less pain in the head, with a sense of fulness and throbbing. There is a severe pain in the back or loins, with a sensation of bearing down in the pelvis.

This bearing down pain in the pelvis, sometimes, is very severe, and the pains may extend down the thighs. There may be nausea and vomiting, but this is not common. Also a feverish sensation and full, hard pulse. The bowels are costive. A general feeling of uneasiness, and, when the other pains are not violent, this is sometimes the only symptom. Now, when called to such a case, all you have to do is to counteract the common symptoms. Immerse the hands and feet in hot water; give warm infusions internally, such as an infusion of spearmint or catnip, or any of the diaphoretic infusions. Give a simple cathartic that will operate in a short time—an infusion of senna, manna, and Epsom

salts, rendered somewhat stimulating by a small portion of the tincture of capsicum. As soon as the medicine has operated, she will be relieved; but, before it has operated, a warm hip-bath should be used, and warm fomentations applied over the pudendum, or she may be placed over vapor of bitter herbs. I have frequently relieved patients in twenty minutes by the alcoholic sweat, or vapor-bath. It does not always require emmenagogues. This power may be strong enough, and it may only be necessary to relax the parts. Thus, the hip-bath, or warm fomentations will be the best means. It is your business to remove the cause, and nature will take care of the effect. The cause is, mostly, in a severe cold that causes a constriction of the fibrous structures, and thus the secretions are obstructed.

I have witnessed the most happy effects from the reaction upon a cold hip-bath. Let the patient be seated in a tub of cold water so as to cover the hips, and remaining thus a few minutes, while the feet and hands are immersed in hot water. Then let her arise, and be briskly rubbed and well dried, and placed in a warm bed, with flannels around her. She will soon break out in a perspiration, which will be effectual in starting the menses. While the patient lies thus in bed, let her drink freely of a diaphoretic infusion, as pennyroyal, catnip, or sage tea, and place hot bricks to the feet, back, or sides. This course will seldom fail.

Prof. CURTIS used the vapor baths and lobelia emetics in these cases, and this course is, usually, no less successful.

In cases that are of a chronic nature, and which require still more thorough or specific means, you may use some direct emmenagogues, in addition to these means now described. You need not employ, at first, any that are very strong—tanzy tea will sometimes be sufficient—but when you require a more powerful emmenagogue, you will find it in the black cohosh. But you will do well to make sure your diagnosis, and see, in being called to a supposed case of suppressed menses, that you are not treating a case of pregnancy. From the symptoms I have given you, you will know the cause

CHRONIC AMENORRHEA.

The characteristic symptoms of this disease are a partial or total want of the menstrual discharge. The menses may never have appeared, or, having appeared, are again suppressed, for a longer or shorter period.

When several months have passed without their occurrence, we may be justified in pronouncing it chronic amenorrhea.

The patient usually suffers more or less with headache, a faulty action of the vital functions, debility, loss of appetite, irregular appetite, a dusky, sallow appearance of the countenance, the eyes having a jaundice-like appearance, an appearance of premature old age. Though this will not be present in very young persons. Where the menses have never appeared, and the person is past the age at which they should appear, say between nineteen and twenty; if she exhibits no signs of ill health, you will be safe in concluding that the non-appearance of the menses is the result of a peculiarity of state, or want of some of the proper organs upon which that depends. In this case, no medication is necessary. Do not go to doctoring a patient before she is sick, because a function which ought to be exercised is not.

Do not medicate, even though the subject may have passed twenty-five, or any other age, without the appearance of the menses, unless she exhibits symptoms of ill health. On the other hand, if she has passed the period at which the menses should appear, and they do not, and this is accompanied by ill health, of course, it requires your interference. If it has ever appeared, and has been suppressed, and she exhibits no symptoms of ill health, you ought to be very cautious about how you interfere; but lay this down as your maxim: Make the patient healthy that she menstruate; not make her menstruate that she may be healthy; for, if she is healthy in every other respect, nature will attend to the menses.

If the stomach is deranged, give her an emetic, and follow it with a cathartic, and let that cathartic contain podophyllin. Bathe

the surface at night, in an alkaline solution, and, in the morning, in salt water, made quite stimulating by spirits, but cool. Let the feet be bathed in warm water at night. You will find that such patients are invariably inclined to have cold feet. Give her alteratives, and let her, as often as once a week, take a thorough sweat, either the alcoholic, or vapor-bath will answer; but the alcoholic is most convenient. Repeat your emetic and cathartic, as often as once in a week or ten days. Keep her bowels in a lax condition, so that there will be at least one operation every day. Let the cathartic contain podophyllin, which is one of the best emmenagogues. Give her the restorative bitters recommended in my work on Surgery; and after using this awhile, alternate it with the alterative syrup; but in using this, it is better to leave out the sassafras, which seems to have the effect of suppressing the menstrual discharge, and add, in its stead, a good deal of the motherwort.

Now, thus far I have said nothing about emmenagogues, which is the sheet-anchor.

The emmenagogues have a great tendency to excite the menstrual secretion, and should only be used at the proper time, otherwise, great harm may be done. Before giving the emmenagogues, you should make inquiry of the patient, her mother, or some one else, as to the exact time of the last appearance of the catamenia, and if it has been a long time, assist them in recollecting it, by asking if it was just before or after Christmas, the Fourth of July, or some other day that will be likely to be remembered; and after you ascertain as nearly as possible the time, then determine by dividing the time into lunar periods, or terms of twenty-eight days, and thus you may know the day, perhaps, on which you may expect to succeed with your emmenagogues.

Now, commence with these three or four days before the time it should appear, and continue them for the same length of time after the period; if it does not appear, wait till the next time, and follow the same course.

Various emmenagogues have been used. I will mention some of the most important, and you can make your own selections.

If you know the exact time, begin a few days beforehand, with the emmenagogues, and the day it should appear, give podophyllin ; and, after it has appeared, subject her to the alcoholic sweat, with her feet in hot water. This course may be continued for a day or two.

LECTURE XLVII.

SUPPRESSED MENSTRUATION.

(Continued.)

The emmenagogue which I have been in the habit of using, and relying upon, is a pill of dry sulphate of iron to four grains of white turpentine. This should be given three or four times a day, and on the day the menses should appear, I add one; and if you give this, be cautious about the quantity, or you may cause inflammation of the uterus. Give it in the form of an infusion, and then you are not so liable to give over doses.

The *macrotyrs racemosa* is one of our most reliable emmenagogues. It is safe in its use, and generally prompt in its action. The dose of the saturated tincture is a tea-spoonful, repeated once in three hours.

Some of our most eminent men have relied most confidently upon it. KOST, in his *Therapeutics*, puts it as his first example, and it has already been stated that Prof. MORROW esteemed it much. A tincture of musk has been used, with good effect, as an emmenagogue.

It will frequently be necessary to continue the treatment for several months.

If you are called to a case where the menses have never appeared, and the patient has a dry cough, and hectic flush on the cheeks, headache, debility, darting pains throughout the body, dyspeptic symptoms, and generally costive, you must commence with constitutional treatment—an active emetic—follow it by a

cathartic, which should be podophyllin. Keep the bowels regular and the skin moist.

When you will have thus instituted your constitutional treatment, you may begin to look for an opportunity of employing your specific means for procuring the discharge.

If, at any times, there are bearing down sensations in the lumbar and sacral region, and other symptoms indicating the approach of the catamenia, aid them, by giving emmenagogues, but be very careful that too much is not given in your absence. As a general rule, put the feet in hot water, and apply hot fomentations over the pelvic region, and subject the patient to the alcoholic vapor; if these fail, instead of warm applications, use the cold hip-bath, dry off, and wrap her up in warm flannels. Keep the feet warm, and the head cool; apply cooling evaporations to the head, either water or alcohol. If these symptoms pass off without any appearances of the menses, wait until next time, and follow the same course, and so continue for months, till the menses have appeared. However, if she recovers her health, without the appearance of the menses, stop; it will only show that the suppression depends on another cause. Let it alone. If you restore her to health, and they do not appear, leave the rest to nature. You will, frequently, be aided, by applying an irritating plaster on the lower sacral and the lumbar region, and continue this as long as she will bear it. This will, frequently, bring about the menses.

Various articles have been used as emmenagogues, which I will mention. The blue vervine is generally recommended, madder, chamomile, dry fennel, motherwort, thyme rhue, saffron—different preparations of musk—iron, myrrh, gum guaiacum, aloes, and the tonics generally. A syrup made of hops, tamarack, and cypripedium, and spikenard is used by Dr. BALDRIGE. It is a very good emmenagogue—it acts rather as an alterative; but I have had the best success with our common compound restorative-bitters.

But you will have to be governed by the symptoms. As the cause of the suppression of catamenia is, frequently owing to

the rigidity of the os uteri, you will find belladonna a good article to dilate this, and will, by the same means, relieve the pain. But do not employ this, until other means have failed.

It may be found that the menses have been prevented from appearing by an imperforate hymen. If the symptoms come on at the time, and there is no discharge, you may suspect that there is an imperforate hymen, and, if so, rupture it.

I have treated many cases of suppression of the menses, which had baffled the efforts of physicians of various schools, and have succeeded by these simple means.

One case was a young lady who, at the age of sixteen, had two slight shows, but she was now twenty, and had had no further appearance of the menses. Her health had gradually declined—she became feeble—there was a hectic flush on the cheek—a slight cough—dyspeptic symptoms—coldness of the feet and hands, with hardly any perspiration—dry skin—a burning sensation in the face—and, from this, the casual observer would suppose her to be in good health. But she was pale around the lips—a fulness of the head—feeble back, and pain in the pelvic region, though no catamenia appeared. Her bowels were costive. These were about her symptoms. For four or five years she had been treated by an old school physician; but he talked about her going into consumption—and she was next treated by a Thompsonian, who carried her through a regular course of steam, pepper, and lobelia; but they were soon forced to abandon all hope in that system. She then waded through the water, in a hydropathic course; but I will tell you what that course was: it was the shower-bath, the plunge-bath, and cooking in the packing wet-sheet—a course too frequently followed at water cure establishments. Patients are always injured by the shower-bath, and the wet-sheet pack is as often used to cook the patient as the steam system. She went through the hydropathic course, according to their science. That having failed, also, she was sent to the sea shore, and placed under a skillful physician, Dr. GILES; he tried to cure her by sea bathing and air, and finally sent her back to Ohio, as incurable. She had grown

worse all the time, and the family became very much alarmed. I was sent for, and pursued the following course :

In the morning I had her bathed in hot water, and I gave her warm aromatic infusions internally, then put her to bed, with some warm bricks to her feet, and, by this means, got her into a slight perspiration. I had her thoroughly bathed in an alkaline solution, and, when she commenced sweating a little, gave her an emetic of lobelia, with catnip tea, and continued this until she got into a thorough perspiration. I let her rest that day, and next morning gave her lobelia enough to operate freely four or five times. I then directed that her whole surface be bathed at night in an alkaline solution, and in the morning with warm water and whisky ; but not so us to wet but a small portion of the body at a time, and wiping off dry ; and, at the same time, bathed her feet in hot water. During the day, I had her take three times the restorative bitters, and, as she was costive, gave her two or three of the anti-dyspeptic pills, made of the extract of podophyllin, aloes, extract of gentian, and Castile soap. I continued these pills about eight days, and then repeated the cathartic and emetic, and followed this at night by the alcoholic vapor. I tried to count the time her courses should appear, but could only *get* within eight or ten days—some four years having elapsed. I then commenced a few days before this time, as near as I could calculate, to give the restorative bitters with motherwort, and repeated the cathartic, by adding the podophyllin to the restorative bitters.

The result was, finally, at the end of the first month, she had a slight show. She continued to gain strength from that, until about ten days before the time I commenced again, by repeating the cathartic, and two days beforehand bathed her at night, and subjected her to the alcoholic vapor in the morning, and all was right. From that time till now, which has been five years, she has been perfectly healthy.

Now, this is the history of perhaps fifty cases that might be given.

This is a fair sample of my mode of treatment, and I have

not failed in a single case, unless in tuberculous disease of the lungs. But, in simple functional disease, you will give relief by this course in a single month; but, sometimes, it may take several months. You will notice in this treatment, that we aim at the restoration of the general health, instead of the restoration of the menses.

Bear in mind, that, if the patient is healthy, and the menses do not appear—let her alone—nature will take care of that.

LECTURE XLVIII.

DISEASES OF CHILDREN.

I shall now proceed to speak of the diseases of children. It may be proper here to make some remarks upon the proper management of mothers, previous to the birth of the child. This was considered, to some extent, in my lectures upon practical midwifery, and I will merely remark here, that a healthy mother is most likely to give birth to a healthy child, and any medicine, administered to the mother, of a debilitating character, during utero-gestation, will affect the child; therefore, you should be cautious how you give the mother medicine, for you are not only dealing with her, but the child.

Many women are in the habit of being bled during the term of utero-gestation, and it will invariably be found that the child, under such circumstances, is in a weak and debilitated condition, and remains so for a long time after birth—if, even, they ever recover. Those who indulge in highly stimulating diet will injure their children, especially is this true with regard to the use of ardent spirits; the child's vital powers will be feeble and excitable, besides having a predisposition to becoming a drunkard—the greatest calamity that could possibly befall it, death itself not excepted.

But there is another danger attending the injudicious medication of the mother, as great—ah! much greater—I mean the liability of engrafting on the constitution of the child a cachectic condition, or scrofulous diathesis, by the use of *mercury*. In speaking on the subject of scrofula, in my work on Surgery, I

have given my views freely, that a large proportion of children affected with scrofula, are made so by the mother's taking calomel, or mercury in some form, during utero-gestation, or while nursing the child; nor am I alone in this matter. I have the very best authority. HANOVER, in his work on Mercury, holds forth the same doctrine very clearly. And this condition does not stop here; it is transmitted, from generation to generation, until they become so strongly impregnated with it, that the race finally runs out. Now, if I had no authority on this subject, (and the fact is, when I spoke of the matter in the "Surgery," I had never seen this authority,) I should, from my own experience, have come to the same conclusions. There have been scores of children, born of healthy parents, who had well-marked scrofula. In fact, such cases, in our day, are not uncommon, and you can trace them directly to the influence of mercury. The mother either took calomel before birth, or while nursing. Now, the responsibility that a physician takes on himself in prescribing for a mother is of no small consideration; and he ought to reflect, that, when he is giving this medicine to the mother, he is transmitting a most horrible disease to future generations. It may not materially injure the mother, but it will shorten the days of the child; one single prescription may entail this curse on thousands upon thousands of unborn men and women!

BLUE DISEASE.

The first disease—if a disease it may be called—that I shall notice, is that which is called the blue disease of children. This condition of the child is owing to the closure of the foramen ovale, so that the fetal circulation is continued in the infant. The symptoms present themselves in early life. The child may appear to be healthy when born, but, all at once, if laid on the left side, turns blue, and is immediately thrown into spasms, and, if not relieved by changing the position, will die. Turn it on the right side, and bathe it in cold water, and it will revive. In order to insure it does not change its position, it should be placed

on a pillow, and fastened to it, so that it will be kept in that position. In addition to bathing its surface in cold water, it should have some cold water to drink, and fresh air to breathe; its surface should be excited with brisk friction, so as to sustain or revive the cutaneous circulation and fill the small vessels. Coming in contact with the atmosphere will assist in oxygenizing the blood, and so will cold water, and this fact should be remembered.

The diet of the child should be the mother's milk, if she has any; otherwise, it should be of a nourishing character, and as nearly the nature of milk as possible. These are about all the means that can be used with advantage. Care should be taken, after the symptoms have subsided, not to lay it too long on its left side, nor to handle it roughly. The foramen ovale may have closed, and rough handling rupture it again. The child should be kept from crying, but do not give it paragoric—give it cold water and breast milk—however, if it continues to cry, give it catnip tea. And I have lately used, with good effect, the extract of hops—small portions quiet them down immediately. The child should not be allowed to be dressed, for, if they dress it at all, they will chafe it up too tightly; the child then will not regain its health, but will languish and die. The bandage around the umbilicus should not press the abdomen in the least; it should be just tight enough to secure the umbilicus. The German mode of nursing a child is preferable; they never dress it until it is six weeks old, but keep it tied on a pillow; so that the nurse can take it up without pressing on any part too much, and can trundle it around any way, without hurting it. But you need not tell our people, in this country, to do so, unless it is positively the only way to save the child from dying; if so, of course, they will submit to it.

LECTURE XLIX.

A P T H A .

The next subject I shall notice is aptha, *thrush*, or sore mouth of the child. This usually comes on about two or three weeks after birth; but it is very uncertain; sometimes it never comes on; and it is supposed by some that, if it does not, the child is unhealthy; but I do not believe that doctrine.

The first symptoms are, generally, small white or yellow tubercles, about the size of a pin's head, on the lips or tip of the tongue. The white appearance is said to be more dangerous than the yellow, and more likely to spread and be obstinate. There is, generally, much pain and soreness of the mouth. In the morning, when the child has slept over night, the mouth will be covered with a substance resembling cheese.

As the disease progresses, it turns of a dark brown color, and the whole mouth will become extremely sore, and, frequently, reaches down the throat, and to the stomach.

But, generally, it passes off in a few days, and requires but little treatment. It sometimes rages as an epidemic, and, where it does, the child is apt to be very sleepy for several days before it comes on, and the parents will not be suspecting any difficulty: this continues until the disease begins to make its appearance; but you may take it for granted that the disease is coming on, in its most dangerous form. It is, occasionally, accompanied by severe vomiting, especially just after taking milk, which it throws up in

a coagulated state. But vomiting is not an invariable symptom, though it occurs frequently. Diarrhea frequently accompanies the thrush, in its malignant form. It occurs in the early stage of the disease, and is very distressing; the discharge being yellow or greenish.

Treatment. I would recommend a very mild treatment, if it is a common case: a simple wash of borax and honey, used three or four times a day, by washing out the child's mouth thoroughly. I have, however, succeeded, where this failed, by using a wash of the marsh rosemary. Just use this alone, sweetened with honey, and if you let the child swallow a little it will do no harm. If the disease is very severe, and the child feverish, give a small portion of the neutralizing mixture, in the form of an infusion, in tea-spoonful doses, until it produces an effect. However, if the child is very feverish, add something more cathartic. I have frequently given the neutralizing mixture and the compound powder of senna, two drachms of each added to a pint of boiling water, and then sweeten it very sweet with loaf sugar; use a tea-spoonful at a dose, once an hour. You can generally, however, produce sufficient cathartic effect on the child with the neutralizing mixture alone. A very good preparation is to combine the neutralizing mixture with the hydrastis. Take equal parts and make an infusion of these articles. It is tonic, and prevents the child from becoming debilitated. This combination, I have been very much in the habit of using for older persons, in case of dysentery. Continue it until a mild cathartic effect is produced. If, however, the child is very weak, be cautious about using any cathartic remedies. I have used small portions of the neutralizing physic, in connection with the oil of cream, or butter: this is very good for any person with dysentery, being both nutritious and cathartic.

At this stage it is better not to let the child nurse, for it is poisonous to the mother's nipples, and makes them sore. You may give small portions of magnesia, or a weak solution of saleratus with mint tea; sweeten this with honey. All the time you are giving

the cathartics, use the mouth wash. You may make it more astringent by adding raspberry leaves. Dr. BALDRIGE used to recommend, with a great deal of confidence, a wash made of shumac. In using the mouth-wash be careful not to use a brush, to make the gums bleed; the softest sponge is too harsh; use a swab made of soft cotton. I have found an infusion of the *prunus Virginicus* and geranium excellent in arresting the diarrhea. This should be prepared in milk and boiling water; it may be sweetened and given to the child in half tea-spoonful doses, once an hour. I prefer this to the others I have mentioned as a tonic. It will arrest the diarrhea, without producing feverish symptoms.

If the child can nurse now, it is better to let it do so; but you should have its mouth thoroughly cleansed beforehand, and the mother should wash off her nipple afterwards; otherwise her nipple will become sore, and the two be mutual sources of disease to each other. If the child is very weak from diarrhea and a soreness and fullness in the abdomen, apply bitter herb fomentations over the abdomen—say, a strong decoction of hops in vinegar, laid over the child's abdomen, and repeated as often as it can bear. After this, apply the elm poultice, so as to produce an antiseptic effect. At the same time, use yeast in connection with the medicine I have just mentioned. Sweet oil may be used as an aperient; but be careful to use the purest kind. I have found a better effect from the oil of cream. Dr. BALDRIGE used to recommend sweet oil and spirits of nitre, given in tea-spoonful doses, every hour. I have also used it some, and have a favorable opinion of it—though it is giving the spirits of nitre pretty freely—but I never saw any evil effects from it. This is especially applicable where the child has been purged a great deal, and there is danger of gangrene. After this has operated, give the yeast. A thin elm poultice should then be placed over the abdomen, and covered with dry cloths to prevent the child from becoming chilly.

If there is danger of putrescence, you may add charcoal, or a half a drop of pyroxilie oil. I will repeat here, that you will

seldom find much of this treatment necessary. If you are called early, wash out the child's mouth with borax and honey, four or five times a day, and you will generally relieve it in a day or two; if not, add hydrastis, and alternate this with the marsh rosemary.

SWELLING OF THE CHILD'S BREAST.

Infants, not unfrequently, have a secretion of milk in the mammary gland, causing them to become much swollen. This is as apt to occur in one sex as the other, causing great pain, and even death in some cases. I was called to a child not long since, that had been screaming for hours, and which had occasioned spasms and considerable fever, but the parents did not know what was the matter with it. On looking at the child, I discovered that its breasts were very much swollen, and they had it dressed very tightly with a *nice, slender waist, pinned around very snugly!*

By simply loosening the dresses, I relieved the child considerably. I then went to work to cure it, and did so without any difficulty; but the child would have died in twenty-four hours, if nothing had been done. When you have a case of this kind, the first thing is to press out the milk—this you can usually do with your fingers; but, if not, take a vial and fill it with hot water, pour out the water and clap it over the part, and put a cold cloth around it. This will condense the steam, and draw out the milk; after doing this, rub diluted tincture of camphor over the breast, which will cause an absorption of the milk, and prevent the further secretion of it. If there is any fever, and this continues after you allay the local irritation; or, if you fail to allay the irritation, give some mild cathartic.

A strong infusion of alder flowers is good in this case, it acts as an aperient and diuretic, and is also nutritious. An infusion of rose leaves, has an anodyne and diuretic effect—you may combine these with the alder flowers.

After withdrawing the milk, apply an elm poultice over the breast, with the face of the poultice wet in camphor. If the breast is inflamed, keep on the poultice until the inflammation subsides. The stramonium has been applied, but it requires very great caution; for a short time it may occasion dangerous constitutional narcotic effects. Stramonium ointment may be used with less danger than the leaves.

LECTURE I.

CONSTIPATION OF CHILDREN.

This has been spoken of in the books as a separate disease. Some children are inclined to be costive all the time, and some are made so by taking paragoric, or something else that contains opium. Remove the cause, and the effect will cease. But there may be cases of natural costiveness, and accumulations take place in the bowels that must make the child sick, unless removed. There seems to be no other way of accounting for it, but from the fact that the mother was costive, and the child derived the same condition from her, and this condition may be transmitted to the child, though the mother was not costive to a very great extent. For all cases of costiveness in children, treat the mother. Regulate her diet, so as to keep her bowels in a proper condition, by drinking cold water in the morning, at night, and as much as she can bear during the day. You should not give her too much water at meals; and, in fact, the less fluid taken during meals the better. The food should be dissolved by its proper solvent—the saliva—for it is a well-established fact, that digestion does not commence when indigestible fluids are taken with the food, until those fluids are absorbed. This was amply proved by the experiments of BEAUMONT on ST. MARTIN in numerous instances. When ST. MARTIN ate solid food alone, digestion commenced immediately; but when he drank with it any fluid, the function of digestion was suspended until the fluids were absorbed.

So, when I recommend you to have the mother drink cold

water, I do not mean at meals, or during the time that digestion is going on. Regulate her bowels, as well as possible, by these means, and if they do not succeed, give her gentle aperients. I have often given the mother podophyllin for the good of the child, when she did not need it herself; and it will usually succeed, but if it fails, give the child gentle aperients—bathe it in cold water, and give it cold water to drink, and keep its bowels regular, if possible, without having to give a cathartic; but if this fails, a good cathartic for the child, is a decoction of senna with an aromatic; but, generally, you will not require any thing so strong as this—an infusion of alder flowers will, usually, be sufficient.

J A U N D I C E O F C H I L D R E N .

Quite young children—those even under a year of age—may become affected with jaundice. The symptoms, as in older persons, are, the skin yellow, and stools of a clay color. As the disease progresses, the skin becomes of a dark dusky-brownish color; the whole hypochondriac region, on the right side, is yellow, with considerable tumefaction and tenderness of the side and abdomen, though not that acute tenderness attending disease of the abdomen. The patient is inclined to be costive, skin dry and harsh; the circulation unequal and languid; the feet cold, and there is headache. The digestion is feeble, and, in fact, all the symptoms attending hepatic derangement in older persons are found here. EBERLE states, that it is caused by mercury administered either to the mother or the child itself. I have no doubt but I have seen cases which could have been traced to this cause. Mothers are frequently very injudicious in giving their children calomel, or blue pills, on their own responsibility, and thus cause disease in their children.

The course of treatment which I shall recommend, will not vary materially from that proper for older persons—a hepatic treatment generally. Commence with a tolerably active emetic, such as our ordinary emetic tincture, and follow this by a

cathartic. It is not generally necessary to give an active chologogue cathartic, as in older persons. Our compound of senna, rhubarb, and sanguinaria, a drachm of each, added to half a pint of boiling water—though you should not boil the articles after putting them together, as the strength of the senna would thereby be destroyed. Let it stand two or three hours, strain and sweeten, and add as much fennel seed as there is of either of the other articles, to make it pleasant to take. Give this in two drachm doses, once an hour, till it operates freely. Give this, or some other mild cathartic, that will operate actively. This should be repeated as often as once in two or three days; and in the mean time, give alterative preparations of leptandria, in the form of an infusion, of from one-fourth to half a grain at a dose, depending on the age of the child. This should be given between times, so as to keep up a gentle action of the bowels, while it also acts on the liver, and is one of our best tonics. This may be combined with the cathartic. But I like the effect of the leptandria given between times better. I have used this treatment considerably, and with good effect.

It generally takes four or five days to remove the violent symptoms; yet they may be removed in two or three days, but I have found it not best to hurry so. I have oftener taken a week than less time; and I think practitioners will generally find it better. To try to do it in less time requires so much medicine, that it debilitates the patient. You must not hurry the matter; the patient will not die, though it is a dangerous condition.

At the same time, you should pay attention to the surface, bathe in dilute alcohol or whisky, and rub the surface briskly with the hand; and the bath should be repeated as often as three times a day, and as long as there is any tenderness over the abdomen and hepatic region. A fomentation of tanzy and salt should be applied over the abdomen, until it gets up a redness of the surface. Follow this by a poultice of corn meal mush, thick enough to prevent its cooling too soon, and cover with dry cloths; but if there is too much tenderness to bear this, you may

just apply cloths wet in some mild stimulating liniment, and apply at the same time over the liver. It will not usually be necessary to continue this more than a day, before the acute symptoms will subside.

The local applications may be made while the patient is under the influence of the cathartic, and as soon as the cathartic has operated, give diaphoretics; an infusion of sanguinaria, sweetened and diluted enough not to irritate the stomach to cause vomiting, but just enough to cause slight nausea, is very good; half a grain of the hepatic powders, given at the same time, once in two or three hours, will be an advantage. The diaphoretics should be continued until they produce free perspiration. Bone-set operates well; it is tonic, as well as diaphoretic. This may be continued, to keep up a little action of the skin, from day to day. As soon as the tenderness has subsided, and the patient appears to be convalescent, you may leave off the active treatment, and rely on alteratives. Instead of the above, a strong syrup made of sanguinaria and hydrastis may be given, in teaspoonful doses, to keep the bowels open: give it once in six hours. This should not be continued more than a week or ten days, as it will begin to act too much on the bowels. If there is not sufficient action upon the liver, and the stools continue of a clay color, you must add something which acts more powerfully on the liver; add leptandria, and if that does not do, add small portions of podophyllin to the hepatic powders; but you must be cautious not to give too much. These powders contain hydrastis, podophyllin, and sanguinaria, all of which act on the liver. But when you have corrected the stools, leave off evacuates, and put the patient on wine bitters.

I would not recommend the constant use of podophyllin, for it may produce debility. You must be more cautious here than in treating an adult, or you will produce a disease more obstinate than the original. Dr. BEACH recommends the wine bitters, with this modification: that you^u use more of the hydrastis, adding boiling water—sweeten with loaf sugar, and a sufficient amount of Castile soap to make it laxative. This is the best remedy for

jaundice, in adults or children, I ever used. Where there is a torpid state of the liver, add more hydrastis; if there is retention of the urine, an addition of queen of the meadow, as it is diuretic as well as tonic, will have a favorable effect.

RETENTION OF URINE.

In some cases there is a want of the secretion of urine, and, in others, it is secreted and retained; most generally, however, it depends on inactivity of the kidneys. It usually requires but mild treatment. Still, it may need a good deal of attention. I have generally commenced by simply giving the neutralizing cordial. They are always costive in this case, and this has a tendency to operate on the bowels, and regulate the stomach. I give this until the irritability of the stomach is allayed, and follow it by an active cathartic. If there is much tenderness over the pubic region, from the urine being retained, use bitter herb fomentations. After you get up a little irritation, remove this, and apply an onion poultice—hot as the child can bear it. This will generally start the urine very soon. You should continue to treat your patient with active diuretics. Large quantities of the horsemint, in combination with spearmint, sweetened with white sugar, is an excellent diuretic for children, and is of a soothing effect. If you wish to give the patient a cathartic, add senna enough to make it laxative. You may add to this, with good effect, the queen of the meadow. It is sometimes well to give from five to ten drops of the sweet spirits of nitre, three or four times a day, in connection with the diuretic infusion. If the urine is secreted and retained, after using the fomentations, onion poultice, and other external applications, without success, you should not wait—you may cause the patient a great deal of pain, unnecessarily, as well as danger. Introduce a catheter and draw off the urine, and then commence treatment to prevent it from recurring thus. Continue the use of the catheter, till you have regulated the system. Bathing of the surface is as important in this as in other cases.

LECTURE LI.

HAMATURIA.

Blood is sometimes found mingled with the urine of children. This, however, is not generally a dangerous symptom. It may be relieved very easily. You will scarcely ever find any thing else necessary but the infusion of peach leaves; you may add to this a little sweet spirits of nitre. An infusion of bayberry will generally succeed.

The common hollyhock will answer in some cases, but is not so good as the remedy first above named.

OPHTHALMIA OF CHILDREN.

This disease may be confined entirely to the muscular portion of the eye, or it may be confined entirely to the ball of the eye, or it may affect both. It may be of a scrofulous character, or simply inflammatory. It often depends on some disease of the mother at the time of birth, as leucorrhea, or some other bad habit. It may be caused by the retention about the eyes of the substance that is found upon the child at birth. But we can rarely trace it to any direct cause. It is generally more of a chronic than an acute disease, though it may progress very rapidly. Sometimes the whole system seems to be affected, or it may be entirely local. The patient is generally costive.

I would recommend a mild cathartic, and a wash of hydrastis and borax. If there is much discharge from the eyes, either of water or puss, you may add an astringent, such as the raspberry

leaves, or an infusion of the bark of the shumac, combined together; hydrastis, shumac, and borax, and use it warm, at first; but as the disease becomes more chronic, it may be used cold. If there is a great deal of fever, after using the cathartic, or while using it, apply an elm poultice over the eyes, and use diaphoretics; but if it is a very weak infant, have them not very strong. You may use a poultice mixed with the tincture of lobelia. I have used a poultice made of peach leaves. Get the green leaves, if you can, but if not, use the dry ones, and add a small portion of slippery elm. I have also used it with a decoction of the shumac. A poultice of the green bark of the osier, simmered in milk, has been recommended, with the addition of borax, or a wash, or infusion, of this in milk.

These cases are more obstinate in children than in adults. If chronic, the whole head will become affected. If this be the case, wash the face and whole surface in salt water. If this fails, wash the head in weak tincture of lobelia; but be careful not to get it in the eyes. The feet should be kept warm, and the surface as cool as possible. Soak green tea till it becomes soft, and then apply it, in the form of a poultice, to the eyes; add to this, lobelia, after the acute symptoms have subsided. An astringent wash, made of raspberry leaves, or the marsh rosemary, is good; but it should not be strong at first—increase the strength as the disease progresses, and add the tincture of myrrh. The poultice, in the acute stage, should be removed occasionally. But before the part dries, you must wash it, as any remnant of the poultice remaining on the face will irritate and make it sore. Where the disease assumes a really violent character, with a free discharge from the commencement of purulent matter, it requires a very different course of treatment. If the first symptom should be a redness of the eye-ball, as well as redness of the internal surface of the lid, with little postules on the ball of the eye, very soon the ball will swell considerably, and the internal surface will be one suppurative mass. The eyes will be glued up, and, on opening them, a tea-spoonful of matter will discharge, three or four times a day. You cannot see a single trace of the proper color of the

eye. This is a horrid condition, and, under ordinary treatment, a hopeless one.

The treatment I would recommend, after the soothing applications have failed, is an application of the tincture of myrrh. It will make the child cry a great deal; but, no matter, you must put it on. The pain will soon cease, and the child fall asleep, and in a few days the eyes will be well. I treated, in this city, a few years ago, one of the worst cases I ever saw. The soothing applications of hydrastis and borax had been tried, also the elm poultice and cold water—but all did no good. The child's eyes seemed to be entirely past hope; they were covered over with a thick deposit, and discharged puss freely. They informed me that, on opening the eyes once, a tea-spoonful of pure puss was discharged. I applied myrrh in its pure state twice a day, and in three or four days there seemed to be no trace of disease.

If the disease assumes this violent form early, commence the treatment early; it will cause a great deal of pain at first, but it will not do any harm.

D E N T I T I O N .

Cutting teeth, as it is called, is generally more or less troublesome among children. There are various difficulties connected with teething which require active treatment; such as diarrhea and cholera infantum. The treatment of these must depend on the circumstances of the case. If the teeth are difficult in protruding, and cause a great deal of irritation, and the child is nursing, do not give medicine to the child, but to the mother. As soon as the teeth come near the surface, I recommend cutting through with an instrument.

Your instrument should be thick, to press the parts from each other, so that they will not close up again. And be sure that you cut down to the teeth, but do not injure their substance. There is, sometimes, a difficulty of the action of the mesentery glands—the food passing through without being digested, and the chyle passing without being absorbed. In this case, an altera-

tive treatment should be pursued. Cathartics, I have not found to be best. If the child is nursing, give the medicines to the mother, and they will operate sufficiently. Emetics, however, will do good in this case ; which must be given to the child. If you give the child a cathartic, let it be mild ; something like the neutralizing physic. Bathe the child in an alkaline solution and apply a warm poultice of allspice and brandy, over the bowels. This excites the action of the absorbents, if there is no organic derangement. There will frequently be considerable irritation of the brain in teething—for this, apply a strengthening-plaster between the shoulders ; add a little capsicum to the plaster, but not enough to make it too irritating. For starting in sleep, nervous irritability, and danger of spasms, you may give some gentle anodyne or nervine, such as Kost's Anodyne, or Cypripedium, in the form of an infusion. Volatile stimulants, such as aqua ammonia, given in from three to five drop-doses, in water, several times a day, operates well on the stomach and bowels. The diet should be cautiously guarded ; the child should not be allowed to swallow any solid substance, nor eat twice or three times as much as it ought.

Milk, well scalded, is very good ; but sometimes it does not agree with it. It should be slightly salted, for then it is more easily digested, and the nutrition is more easily absorbed. The mother should also be dieted when nursing ; she should use only nourishing and digestible food. If the child is affected with spasms, use constantly a preparation of the cypripedium and skull-cap, to which, add a small portion of the tincture of musk ; so that the child will take from one to two drops at a dose. But if called during the time of a spasm, if the child can swallow, give an emetic of lobelia ; if not, give an enemata of the same article. When the teeth get through, you are generally through with the difficulty.

F R E N U M L I N G U A .

We are sometimes called upon to attend to tongue-tied children, but parents are apt to be too much alarmed by this. It consists in a ligament extending from the surface below the tongue, which is inserted into the tongue near its tip, so that it admits of less motion in the extending this member. If it troubles the child when nursing, cut it; this you can do when the child is asleep. Use a pair of blunt-pointed scissors, and be careful that you do not cut the sub-lingual artery; better not cut far enough, than too far; for the child will cry and tear it apart, up to the proper point.

E R Y T H E M A I N T E R T R I G O .

We are sometimes consulted in reference to the chafing of children at the joints, where the skin is in folds, occurring more frequently in fat children in the groin, and wherever the skin is wrinkled. It is dependent upon the detention of the perspiration, and acrid humors, thus, where the skin remains in contact. The parts become inflamed and produce a discharge, if neglected.

The remedy consists in an absorbent dust—as that of chalk, magnesia, charcoal, or even flour of wheat, elm, or corn. The best remedy is the preventive—washing and keeping the parts clean.

In bad cases, however, these means may fail, and something else must be done. I have had good success with the green salve, published in my work on Surgery : Take a thin cloth and spread on the salve as thinly as possible, and apply over the part. This will generally cure, in from twenty-four to forty-eight hours, and, if properly managed, will not return again. But whatever you use, wash it frequently with weak soapsuds, so as to keep it thoroughly cleansed from any fluid that may be thrown out from the surface. The green salve has been objected to, on account of the acetate of copper, which, it is said, may produce dangerous constitutional effects; but this only betrays the ignorance of

the objectors. I do not believe that copper is ever taken up by the skin so as to do harm, and besides, this salve contains only one thirty-seventh part of the acetate—thus making less than a homœopathic dose in the little salve applied in this way. I have never seen any constitutional effects from its use. I have known the powder of puff-ball used with good effect; it is finer than superfine flour, and is stimulating. But dry applications are not always the best; they dry up the surface, and leave a soreness under it, and I have often used the green salve to relieve this dryness. But this may fail in some instances, though it has never failed with me, and you ought always to be supplied with abundant resources.

Dr. THORN informs me that he has used, with great success, the impure carbonate of zinc, dusted on, after washing off with soapsuds, as we dust on prepared chalk. You will find it noticed in the United States Dispensatory. Repeat the application two or three times a day; it generally cures in from one to three days. I have used it in other cases, with good effect; and also the sulphate of zinc, but this is stronger than the carbonate.

LECTURE LII.

HYDROCELE.

In hydrocele, the collection of water may be immediately within the scrotum, or it may be within the testes, but this latter is rarely the case. You can easily ascertain which is the case, by making an examination. It is not, generally, a difficult matter to treat this in children. If it appears to be dead, cold, and insensible, as it sometimes does, especially if the water is in the cellular tissue of the scrotum, apply bitter herb fomentations, such as hops and tanzy, and treat the patient as for general dropsy. Give active hydragogue cathartics, and keep the bowels open by giving an infusion of hydrastis and cream of tartar. Repeat the bitter herb fomentations until you produce some action in the parts, and establish considerable sensibility and warmth. When this is done, the swelling will greatly diminish. At the same time, apply a wash of sal ammoniac, (muriate of ammonia,) in the form of a strong solution; or you may mix this with your poultice. Also, use diuretics; a strong infusion of mullein, with a small portion of spirits of nitre. Parsnip is a good diuretic, and may be used instead of the mullein, or with it. The melleon seeds, asparagus, parsley root, and queen-of-the-meadow, are all very good diuretics. Any of the somewhat stimulating diuretics may be used. If the stomach is deranged, commence with an emetic, but this will depend on the condition of the skin; and it will be well, besides bathing, to employ the alcoholic sweat occasionally; but this may, or may not, be necessary. You will generally relieve the patient in two or three days.

H E R N I A .

We may have what is called congenital hernia, which is found at birth, or accidental, which is produced at any time during childhood, but congenital is more frequent. It may be umbilical, or any other, but umbilical hernia is most common, owing to imperfect closing of the umbilicus. The treatment is much more simple than that in adults. Place the child on its back, with the head a little elevated; reduce the hernia and place a flat cork over the part, so as to cover it, and fasten it on with a bandage. I have used another means, which is this: Take a piece of spongy sole-leather of a circular form, the size depending on the size of the opening, and cut it out, concave on the flesh side, so that it will not press directly upon the part, and fasten it with a bandage; then, after having returned the hernia, let the child lie on its back, and bring the margins of the walls together firmly; wet the piece of leather in a strong decoction of white oak bark, and lay it on the rupture. You should not have it large enough to press upon the parts. Have your bandage pretty tight, so as to press the abdominal muscles, and it should not be removed under several days. In a child do not use the decoction strong enough to produce much irritation. After it has remained for several days, the parts will generally adhere, but you had better keep the bandage on for several weeks; but after having removed the pad, apply an adhesive-plaster.

When you attempt the cure with the truss, return the intestine, as in any other case of hernia, by laying the child on its back, and relaxing the muscles of the abdomen, and apply a truss, so as to support the parts that are open. The truss should be covered with buckskin, so as not to be rough and irritating to the parts. Wet the part with a cold decoction of white oak bark once a day, and in doing so, place the child on its back, with the abdominal muscles relaxed, so that the parietes of the rupture will not separate. Be careful that it does not become inflamed.

This course generally succeeds ; but you may find some cases where it will not, and, even after it seems to be cured, you should continue the truss, from two to three months, so fastened that the child can not get it off ; watch that it does not produce irritation. You may be called to cases where the hernia is of several months' standing : then it will not be cured by such means. You will have to wait until the child is older, and use the necessary means for older persons. Dr. HUNT and I treated a case of this kind recently, in which the truss failed, in infancy, and by pursuing the astringent application for several months, we succeeded. My mode of treatment, as given in my work on Surgery, has always proved successful.

DIABETES OF CHILDREN.

The prominent symptom of this disease is a preternatural secretion of urine. It sometimes amounts to ten or twenty times the proper quantity, in the course of a given period ; there is also a great deal of thirst ; especially at night. There is a stupor and dullness in the appearance of the child all the time. It becomes emaciated, and loses flesh rapidly ; the abdomen becomes swollen and bloated, though it is not tender to the touch. The pulse is frequent, chorded, and small. There is always more or less derangement of the mesentery glands, so that the child does not receive the proper nourishment from its food, and the saccharine substance in the food passes off with the urine. The pulse is very irregular ; sometimes being soft and feeble, and at other times appearing to be healthy.

In the treatment, you should look to all the symptoms. There is generally a costive condition of the bowels ; in this case, proceed as in other cases of constipation. You should give an occasional cathartic, but the patient should not be purged too freely, for it is already debilitated, and this would render it more so. It is recommended by Dr. BEACH to apply, over the abdomen, cloths wet in spirits of turpentine. This produces irritation of the kidneys and bladder, but tends to favorable results. If it irritates the child too

much, leave it off. Let the mother apply it around her abdomen, and take it internally, till the milk smells of it; it will be better than to apply it to the child. If the child does not nurse, it should use cow's milk, or some animal food that contains oil.

An astringent infusion, as of bayberry, kino, or geranium, will be found in many cases to be quite sufficient to cure diabetes of children, as well as adults. The astringents ought always be first tried, before other means are employed. If they cause constipation, relieve it with the leptandria Virginica, or, you may combine this with the astringents.

I have used an infusion of white oak and dogwood, with great success. I employ it weak, at first, gradually increasing its strength, by adding whisky, occasionally using the alcoholic sweat. But you should attend to this yourself, and not trust it to others, and if it debilitates the patient, discontinue it.

Have the child to drink as little water as possible, if it is thirsty, let it drink milk, with a little water added to it.

Sudorifics and diaphoretics are important remedies in this disease.

When it occurs periodically, at night, use anti-periodical remedies. I have used quinine and capsicum, but be careful not to use enough capsicum to irritate the stomach.

Diuretics are much esteemed, in this disease, by some. They should be used for a day or two, and then be followed by astringents.

INVOLUNTARY DISCHARGE OF URINE.

Involuntary discharge of urine occurs generally at night. This is sometimes hereditary, but, more commonly is a habit formed by the child of wetting the bed at night. It generally lies on its face, and, if this is prevented, the difficulty is usually cured. A great deal can be done by operating on the mind of the child, telling it that it is wrong, and to guard against it. The child should always be induced to pass urine, before going to bed, and if wakened, for this purpose, a change may be effected in its habit.

You should prevent the child from drinking water, or eating fruit in the evening. If these means fail, you may resort to medicines. Two or three drops of cantharides, morning and evening, will generally cure in a day or two; but, if this fails, you must use something else. Give the cantharides in some mucilage or molasses, and gradually increase the quantity, till it produces the effect. It is well to give some mild diuretic, until it increases the urine, and then drop it off, and use the tincture of cantharides. This will usually succeed; but I have added, where there is urinary derangement, astringents, and, it may be necessary to use wine bitters and alteratives. If there is any tendency to diabetes, you should use diuretic astringents, such as beech-drops; this does not constipate the bowels, and is better on this account than geranium. It will increase the urine, at first, and will act, secondly, as an astringent.

IMPERFECT HEALING OF THE UMBILICUS.

The next subject I shall notice is imperfect healing of the umbilicus. This is an accident which occasionally occurs. Usually, the chord comes off, and it heals up, in from two to five days; but, sometimes, the chord will not fall off, but becomes more firmly organized, and adhesion takes place, and it becomes sore and tender. In such a case, cut it off; but notice that there is no blood vessel or intestine in it. Be sure that it is solid, for, when it is, it will have the appearance of a semi-cartilaginous substance. Apply to this some astringent powder, such as that of geranium; this will generally be sufficient, though sometimes it is necessary to apply something more stimulating. I have seen used, as a domestic remedy, a powder made of burnt leather, and sprinkled over the part. But sometimes it requires something more. Apply vegetable caustic, or powder of sanguinaria, or caustic potash. Take a piece of sticking-plaster, and cut out a hole, the size of the fungus, and apply it on the part, so that only the affected part is exposed; then moisten a piece of caustic potash, and barely touch it; but be careful that you touch

every part of the diseased surface; immediately put on vinegar, and wipe off. If it appears to be healthy, dress it with a simple elm poultice. I was called to a case a year and a half ago, to which three physicians, who had been in attendance, had made various applications, for two or three months, without effect. There was a fungus growth, three-quarters of an inch high and half an inch in diameter. It had been cauterized by nitrate of silver, but this only hardened it. Iodine had also been applied without benefit. I looked at it, and after hearing the history of the case, felt amused, and was observed to smile. This rather offended the parents, for they had consulted the best counsel they could procure, and, as had been intimated by the physician—thought it was a cancer. I applied the caustic potash a moment, washed it off with vinegar, applied a slippery-elm poultice, and left. I saw the father a week afterwards, and, he said, it was off and well. There is no particular danger in the caustic potash, for you can stop the effect immediately, by washing with vinegar. The physicians had used iodine, nitrate of silver, and I do not know what else—but, they dared not use caustic potash; yet they had proposed to cut it out down to the peritoneum, and they were not certain but there was a connection between it and the internal viscera, which endangered the child's life! But physicians are beginning to learn that there is a caustic thorough and safe. You will find caustic potash rarely recommended in the books of the Old School.

LECTURE LIII.

DIARRHEA.

Diarrhea, or summer disease of children, is one of the most prevalent and fatal diseases with which we have to contend. It is estimated that not more than three out of five children live to an adult age, and that nine out of ten of these die between June and October. In cities, generally, as far as my observation goes, that estimate is not out of the way. This disease varies very much in different cases. It may be bilious, or purely mucous, or it may be of the dysenteric character, confined more particularly to the large intestine; the mucous diarrhea is generally located in the small intestines, and not generally connected with much pain. Where it affects the large intestine, it takes on the dysentery form, and more of the bloody discharge, and is much more painful; and there is generally much more fever connected with it. The treatment must be governed by the cause and the circumstances. We can not lay down any thing like a square rule of treatment, as in some other diseases. The treatment must vary in every case. If the irritation depends on improper food, such as green fruit and vegetables, which, by the way, is a very common cause, a good treatment is to commence with an emetic; but this will depend on the symptoms. If the patient has been vomiting, it is, usually, well to give an emetic, as it will soon relieve the nausea and vomiting. If there is food passing through without being digested, which you will know by the fact that a particular kind of food is passing from the bowels, which the child was

known to have eaten several days previously. Now, this must remain in the stomach for a long time, for, as soon as it passes into the intestines, it excites their peristaltic action, and immediately passes off. If the stomach does not throw this off, spontaneously, give a mild emetic, and one that will not have a prostrating effect. Give the lobelia emetic. Give small quantities at a time, until you vomit the patient, and follow this with a mild cathartic, or aperients, but not enough to produce irritation. It is not best, in mucous diarrhea, to give every thing to act on the mucous—our neutralizing physic is a good preparation; but I have used for this purpose, the syrup of rhubarb and blackberry, mixed in equal parts, until it produces active evacuations. It also acts, secondarily, as an astringent. If you wish to give something more astringent, geranium, or raspberry leaves is very good, or an infusion of geranium and black cherry, *prunus Virginicus*. Take an ounce of equal parts of dry powder of the articles, cover them with half-pint boiling water, put in as much milk as you have water, so that there will be a pint of fluid, to the ounce of the medicine, raise it to a boiling heat for a moment, and then let it stand to settle. Sweeten with loaf-sugar, and give in tea-spoonful doses, every hour. It is nutritious, and very soothing to the bowels.

During the summer of 1846, my brother and I were practicing in a neighborhood where diarrhea raged as an epidemic, and were under the necessity of giving many prescriptions for children whom we could not go to see, and hit their case precisely. We did not lose a case that whole summer, and we treated almost every child, between one and eight years old. We gave them neutralizing mixture in infusion, until it colored the discharge red, with the rhubarb, and followed this by an infusion of geranium and wild cherry bark, sweetened with loaf-sugar, and a good liniment, as an external application. My friend, Dr. Kost, the same year passed through an epidemic of this disease, having three practitioners, besides himself, who all rode constantly. They lost no cases either.

Where some of the children had been treated by other

physicians, and the parents, they were literally reduced to skeletons; but we raised them immediately with this treatment.

If you are called to a case where you do not know the cause, and the parents have been careful in the children's diet, and there does not appear to be any bilious derangement, it is proper to begin with a cathartic—if it is difficult to get the medicine to pass through, use something more active, and then give an astringent; if the child is debilitated, give a tonic. I have added to the syrup, the wild cherry and hydrastis, as a tonic, with equal parts of rhubarb, and blackberry, and half a part of geranium.

But you will, frequently, bind the child's bowels, and it will become feverish; then do not use the astringents, unless you use aperients at the same time. A very good aperient is, to make a preparation similar to the neutralizing mixture, (using leptandria instead of rhubarb,) of spearmint and saleratus, equal parts. Give this in the manner directed for the neutralizing mixture, an ounce of the mixture to a pint of water. The leptandria is tonic, and also acts on the liver, without producing any irritation of the mucous membrane, as most of our cholagogues do. We were all in a dilemma, with regard to a remedy that would act on the liver, without irritating the bowels. If we give calomel, blue mass, or podophyllin, they will irritate the bowels, as well as act on the liver. The old school practitioners give prepared chalk and calomel, until they irritate the bowels, and give opium to counteract this effect, until they produce irritation of the brain, and the child dies of inflammation of brain, or hydrocephalus; such are the treatments recommended by your books. The leptandria has filled up the vacuum; it will produce cholagogue effects, without irritating the bowels.

The excretions soon become of a dark color, and diminishing in quantity, as you continue to give it. We can manage leptandria to a much better advantage, by giving it in smaller doses than other medicines; as its effects are produced, you may diminish the quantity of the medicine, and lengthen the interval between doses. You may, however, by giving large doses of

leptandria, create free purging, which will require a long time to correct; but this is not usually necessary. When it has acted sufficiently on the biliary secretions, discontinue it, and give tonics; but your tonics should be slightly astringent. You may use geranium or hydrastis, with other gentle tonics; and, if the child is inclined to be costive, use leptandria as an aperient; usually, however, hydrastis alone will be sufficient; but you may add extract of boneset with good effect, give the extract in form of a syrup; the best plan is to give all your medicines for children in the form of syrups. I remarked, in the commencement, that if the child had been vomiting, not to give it an emetic; but, if in the start, the disease appeared to be chronic, give a mild emetic. Yet I would not, as some do, recommend vomiting, as a matter of course. If the appetite is poor, and the stomach deranged, more or less, the tongue coated, and the child is not accustomed to vomiting spontaneously, an emetic operates well. But if the child is vomiting, use all means in your power to allay the vomiting. The pyroxilic oil, in one drop-doses, will usually be successful. A strong infusion of peach leaves, or the bark of the peach tree will generally answer; give it in small doses, of ten or fifteen drops, repeated every ten or twenty minutes; do not boil the infusion, or the volatile acid—which is the most important property—will be lost. Dry leaves are not so good, from the fact that the volatile acid has been, measurably, dissipated. I have frequently allayed the vomiting by tincture of lobelia—about ten drops of the tincture to a gill of cold water. Give this in small tea-spoonful doses, just after the vomiting, and just before the time for the vomiting to come on again. The tincture of ipecac may be given in the same way, especially if there is purging; though it does not act as well as the lobelia. The ipecac, when given in over doses, is cathartic as well as emetic.

My former partner was in the habit of using a combination of the essences of cinnamon, wintergreen, peppermint, and origanum, in equal parts; to an ounce of this, he added about two drachms of the compound spirits of lavender, and gave this, in from three to ten-drop doses.

Where there is redness of the tip of the tongue, this stimulating preparation will not do so well. I have had better success with peach leaves, and in this case, I let them take two or three spoonfuls; in the start, they will vomit it up at first, but the acid operates rapidly, and the second dose is apt to remain longer, and, probably, the third will be retained altogether. As soon as the patient ceases to vomit, give no more till it vomits again. Paroxysms of vomiting usually occur at regular periods; this is generally the case, even in cholera, and you should know the length of the periods. If the patient vomits every hour, or every two hours, give the medicine at that time; but, if it runs over, discontinue the medicine.

If there is much irritation in the lower portion of the bowels, use injections of a saturated solution of borax, in a strong infusion of catnip, immediately after every evacuation. You will frequently, by a single injection, postpone the evacuation for two or three hours, where the patient was obliged to go to stool every twenty minutes; and a few more will cure them altogether, and they will enjoy a comfortable sleep.

Mucilage of slippery elm is recommended, but I do not think it is as good as the other. Some say, use a solution of starch, as an injection, with a little laudanum added to it; but a single drop of laudanum may prove fatal to a little infant. I deprecate the use of opium in all cases for children, where there is the least tendency to congestion of the brain.

If it depends upon worms, use the usual remedies for those. During the whole of this treatment, pay particular attention to the surface; bathe the patient two or three times a day in a good stimulating liniment. Use the hand-bath with children. If the child is hot and feverish, allow it to be bathed in cold water by means of a sponge; but, if cold and shriveled, put the feet in hot water. Rub the surface briskly, until you get up an irritation of the skin. Make an infusion of cinnamon, cloves, and allspice in brandy, wring flannels out in this, and lay them over the bowels. Especially is this to be done when there is soreness of the bowels. You may follow this by hot fomentations of bitter herbs; these

should be used when there is inflammation; if not, do not use such strong means. The child may be under the influence of a cold, debilitating sweat, and the system relaxed; if this be the case, let it be bathed in an infusion of dogwood—use it cool, two or three times a day, and apply a poultice of white oak over the abdomen. I have used the spice poultice in connection with a decoction of white oak, and bathed the rest of the surface with a tonic. You can not give such children much tonic medicine internally. In periodical cases, you can do much by anti-periodic remedies; quinine and iron will answer, but you must be careful not to give much stimulus internally; you may mix it with the astringent syrup I mentioned; if you do, give it early in the day, or latter part of night, so that you arrest it in one day.

This is after the bowels have been evacuated, and the proper means used to arouse the action of the liver. You will find, in an intermittent character of the disease, a disposition to return again after you have evacuated the bowels; but, in many cases, this prescription will be sufficient.

Since I have known the influence of valerianate of quinine to be better than the sulphate—but you can hardly use this in every case, except for children, owing to its great cost, being nine dollars an ounce—I use it in the same manner as you would use the sulphate. You may use the cold bath with good effect, beginning with it tepid, and gradually making it colder, once or twice a day, after having arrested the active symptoms.

If children were all bathed during their infancy, cases of this disease would be of rare occurrence. My children have never had it, and they were bathed in cold water the day of their birth.

LECTURE LIV.

CHOLERA INFANTUM.

This disease, though called cholera, differs materially from the Asiatic Cholera, which has prevailed to such an alarming extent in our country lately; but from this, I suppose, the name has arisen, though cholera infantum was known in this country long before we knew any thing of Asiatic Cholera. It generally commences with vomiting and purging, though in many instances, the first symptom is vomiting, which continues without purging, for two or three days; and, on the other hand, the purging may take place first, and continue for several days, before the vomiting begins. This vomiting, or purging, occurs in paroxysms, every two or three hours, but when there is both vomiting and purging the paroxysms do not occur, generally, more frequently than once in every five or six hours; the purging usually coming on just after vomiting. The patient will, sometimes, continue to vomit till it throws up fecal matter, brought up from the lower portion of the intestines. Bilious matter is rarely thrown up.

It not unfrequently commences with diarrhea, and continues so for several days, before the proper symptoms of vomiting occur. There is, I believe, in all cases that may be properly termed cholera infantum, a febrile action in the system, and this, in many cases, is strictly intermittent, though there is more or less fever all the time; yet there will be evident remissions, at night and morning, like in most intermittent fevers. The disease occurs in the warm season of the year, between July and October, but worst in August. The causes are various, generally those which

produce diarrhea and fevers at that season, of other kinds. Children in cities are more subject to the disease than those in the country. Children that are teething at the time are more apt to have it. It sometimes really appears to be epidemic, though it can not be strictly called so. As the disease progresses toward a fatal termination, vascular eruptions upon the surface are unfavorable symptoms. If healthy worms pass spontaneously from the child, it is considered an unfavorable symptom; but, on the other hand, it is considered favorable if they are dead. There is often much thirst; the child will be constantly calling for drink, and you may indulge it with a small quantity, but do not let it drink too much; a tea-spoonful of cold spring water at a time is enough, while larger draughts would be dangerous.

To allay the vomiting, I have been in the habit of giving small portions of the neutralizing cordial with a double quantity of saleratus. I have often given the child pure saleratus, though this is too disgusting to the taste, and I have usually added a few drops of peppermint, or spearmint, and perhaps sweetened it a little; and there is an advantage in giving the syrup of rhubarb, and mint with this, in the alkali, as that will pass through, and remove any irritable substance that may be present. A very small portion of the solution of creosote or the pyroxilic oil will, generally, arrest the vomiting. If necessary, you may give a mild cathartic. I have had good success with the syrup of rhubarb, sage, and spearmint, and a strong infusion of white oak, to an ounce of the mixture to half a pint of boiling water, to which add one equivalent of saleratus; let it stand, covered tightly, for half a day, or, if you are in a hurry, half an hour will answer; but it is better to have it made before hand; add to half a pint of this, at least four ounces of loaf sugar, while hot; this makes a strong syrup. Give this in from a half tea-spoonful to tea-spoonful doses, and, as the vomiting subsides, give it in larger quantities, and repeat once an hour; but do not overload the stomach—continue it until it operates as an aperient. It is sometimes useful to give an emetic, but this depends on circumstances. If it is nauseated, and can not keep any thing on its

stomach, tries to vomit often, but does not vomit much, there are irritating substances in the stomach, and you should give an emetic. But, as a general rule, where the purging has continued for several days, and there is more or less irritability of the stomach, you had better not begin with an emetic. If you do give an emetic, let it be calculated to soothe rather than irritate the stomach. I have given it with the neutralizing physic. Dr. BALDRIGE used to recommend an infusion of lobelia, sanguinaria, and ipecac, in equal parts, with an equal quantity of neutralizing physic. If the child is cold and the circulation languid, add brandy as a stimulant, or other aromatic stimulants, such as the essence of wintergreen. If you can ascertain that the disease arises from worms, you should allay the sickness of the stomach, as soon as possible, and give vermifuge for expelling them. Apply over the stomach, for the purpose of allaying the sickness, an aromatic poultice. I have generally used one made of cloves, cinnamon, nutmeg, and allspice, pulverized finely, and mixed with brandy. Wring cloths out in this, and apply them over the stomach, or make it up in the form of a poultice, and apply it over the stomach. Cover the poultice with dry cloths, so as to keep it warm.

If there is irritability of the rectum, prolapsus ani, or piles, you will do well to use the injection of catnip and borax, mentioned for diarrhea, or, you may use a solution of salt; and, if this does not succeed, use something more stimulating.

If you are satisfied that there is any disturbing cause, such as eating unripe fruit, give an emetic; for, until you get rid of the irritating cause, your efforts will be abortive. Follow this by a cathartic. To arrest the vomiting, I have had the very best success with camphor. After the patient has vomited, this will arrest it, if there is nothing nauseating on the stomach. The best mode of giving the camphor is, to give it in ice water, once in ten or fifteen minutes, gradually lengthening the intervals. I have frequently succeeded with this, where other means had failed. I have also succeeded in allaying the vomiting by small doses of the tincture of lobelia, or tincture of ipecac, where the

camphor failed. Add ten drops of lobelia to an ounce of water, have it just so that you can distinguish the taste of the lobelia, and then give this in half tea-spoonful doses, repeated once in half an hour. Give one dose and then watch the patient; if it begins to be a little sick, give another, and be sure you are not prescribing against the action of your own medicine by giving it so strong that it will vomit the patient. Now, this is a very common mode of allaying the vomiting, and I have found it very convenient. Every practitioner knows that lobelia will frequently allay sickness of the stomach, and the patient will go to sleep, and after awhile it will bring about its effect, and vomit the patient freely; and when given in small quantities, the patient will frequently recover from nausea without vomiting.

If the patient is effected with worms apply over the stomach and bowels a poultice of tanzy, wormseed, and rue; or you may use either alone, with good effect. I have added, with advantage, asafoetida, a very good remedy for worms. Where worms are present, we suppose them to be a primary cause, if not the principal one. Apply the poultice to the whole abdomen; but you can not do this when there is irritability of the stomach—allay that before you give the vermifuge, and all the time watch the patient, and keep down the irritation of the lower portion of the intestines; this may be done by enemas of mucilage and catnip. You may use an infusion of hops or cypripedium. I have used lately the extract of lettuce, injected into the rectum. It does not produce any narcotic effect. Astringents may be given internally, such as geranium and raspberry leaves. A syrup, as recommended for diarrhea, may be used with good effect. But be careful that there is no soreness of the bowels, as this may make it worse. Weak lime-water has been recommended. I have never used it, but it is recommended by a practitioner worthy of confidence.

A warm bath, so as to come up around the abdomen, is very valuable, but this should not be continued long; and I would remark here, never put a child in a warm bath above the diaphragm, and, as a general rule, not above the pelvis. Fomentations

are preferable. The warm bath is apt to make the child sick. If the child is in spasms, and you put it in a warm bath, as soon as it begins to relax take it out, or it will faint, and, perhaps, it will be its last fainting—if it can swallow a little strong coffee it will frequently restore it. Mustard may be applied over the stomach and bowels.

After you have allayed the irritability of the stomach and bowels, you have not got much more to do ; but there is still, sometimes, a feverish condition, and this is generally of a remittent character, and may have continued for a week or two ; in fact, you should not be satisfied with what the parents may say—examine for yourself closely, by visiting through the day. There may be only chill enough to distinguish a slight coldness of the ears, and followed by very little fever, but this will very much aggravate the other symptoms. The child may, or may not, sweat as it is going off. There may be considerable fever all the time, and this must be attended to, for you have allayed the vomiting and purging, but they are sure to return again, worse than ever—you have not removed the disease. If you stop the vomiting and restore the evacuations, they will be of a white, clay color. It sometimes happens that there is bilious vomiting, but this is very rare. You should then use alterative means. I have been in the habit of using leptandria and podophyllin, in the form of a syrup, though this usually operates too freely upon the bowels. Commence with an emetic, and afterwards give podophyllin ; this course of treatment has been followed with good effect, but since we have had leptandria and podophyllin to use, we have had much less difficulty, and frequently restored a healthy action of the liver with leptandria alone. Give one-fourth grain doses of leptandria, or one-eighth grain of Kost's podophyllin, every half hour, until the discharges change in color, and then lengthen the periods to twice, or even once a day. I have used as anti-periodicals, quinine and lupulin. Take, for a child from two to five years old, five grains of quinine, to ten grains of lupulin. I have sometimes combined with this, an equal portion of the prussiate of iron. Divide this combination into twelve

doses, and give these once an hour, at the time when the child has least fever. It may be that the stomach will not bear it more than once in three hours. If the feverish symptoms return, repeat this. The lupulin has a tendency to allay the irritability, and also inclines the child to sleep; and it has a very different effect from opium, for it is decidedly tonic. An adult will take sixty grains during the day, he will go to sleep and wake up hungry—digestion having gone on rapidly—though you need not expect this effect always. If the stomach is very irritable, you had better give the quinine in solution, with some mucilage.

LECTURE LV.

WORMS.

We will next take up the subject of worms, or verminous diseases of children. I shall not go into a lengthy dissertation on the different kinds of worms, but shall speak particularly of the lumbricoid stomach worms, and the ascarides, or pinworms, found in the rectum—the others, except the tapeworm, produce symptoms similar to the lumbricoid worms, and must be treated in the same manner. The symptoms that indicate the presence of worms are very hard to ascertain; generally, however, you can determine by comparing the symptoms well. But you are never certain that the child is affected with worms, unless you see them passed from it, by vomiting or purging, and then you are not certain that there are any more. There are symptoms sometimes present with them, that are present without them. I am satisfied of this from post mortem examinations. In one case, we had every symptom given in the books, and the child was supposed to have died from worms; but, on examination, no worms were found. But there are other symptoms, such as starting in the sleep, crying out suddenly, tickling of the nose, paleness around the mouth, flush on the cheeks, the tongue slightly furred, but generally flabby. If there is irritation of the stomach, the tip of the tongue may be red; spasms, and turning purple, is caused by the worms rising up in the œsophagus and choking the child. Worms have been known to come up into the child's mouth after death. Diarrhea is frequently caused by worms, though there are worms without it. A bloated condition of the abdomen is

indicative of worms : yet all these symptoms occur from other causes. But when we have a combination of all of them, with a loss of appetite, and feverish condition, we presume it to be caused by worms. Direct the parents to watch closely, and see if the child passes any worms through its bowels. These are the symptoms produced by the lumbricoid, or stomach worms. Those which are found in the lower part of the intestines produce somewhat similar symptoms.

As a general thing it is best to commence the treatment with a mild emetic, so as to remove the mucus from the stomach or bowels, in which the worms subsist ; but sometimes it is not best to give an emetic, if the child is very weak, the worms may come up in trying to vomit it, and choke the child to death. I once made a post mortem examination of a child that died in a paroxysm of vomiting, and found, half way up the pharynx, a hard lump, which proved to be several long lumbricoid worms twisted and knotted together ; now, if you give an emetic when such a thing is present in the stomach, it will certainly annoy the child by irritation in vomiting.

If the child is disposed to vomit, allay the disposition, by giving a strong solution of common salt ; this is very offensive to the worms, and will cause them to recede ; and if the child is in spasms from worms nothing will bring it out sooner than this, and the remedy should be more generally known than it is, though it is known to a considerable extent, as a domestic remedy.

Pink and senna, is as old as the science of medicine, as a remedy for worms. Give this, in cream and molasses, of which the worms are very fond ; but if you give pink, be cautious that you do not cause inflammation of the brain ; that will be very injurious. I have been called to children in a fatal condition, from taking pink, where it had produced its narcotic effect on the brain, and hydrocephalus was the consequence ; and there is no doubt but thousands of deaths are caused in this way, notwithstanding physicians still continue to recommend it indiscriminately. I would rather risk the worms than the pink, unless you

give it in connection with a cathartic. I would recommend it in this form: take equal portions of pink and senna—half an ounce each—to which add half a drachm of podophyllin, and to this, one pint of boiling water; but if you continue the heat too long you will spoil the senna. Make it very sweet, and give in teaspoonful doses until it acts as a cathartic. If it does not operate, give a sufficient quantity of the anti-bilious physic and cream of tartar to make it operate. You may aid the operation by injections. Repeat the medicine from day to day, and in doing this, mix it up yourself, or they will poison the child. If we could always have good senna, so that it would have its proper cathartic effect, there would be no great danger of failure; but such as we find in the markets is frequently of no account.

There are numerous other anthelmintic remedies, for an account of which see Kost's *Materia Medica*. The santolin has of late taken the lead as a worm medicine. The dose is half a grain, to be taken three times a day, and to be then followed by a brisk cathartic. The oil of wormseed and the oil of turpentine are both good and reliable remedies; the dose of these is from five to twenty drops, taken on sugar, or it may be taken in mucilage. It should be followed also by a cathartic.

INFANTILE REMITTENT FEVER.

This is very extensively dwelt upon by authors as a disease peculiar to infants, but I look upon it in a very different light. However, Wood, in his "Practice," takes similar grounds to mine; but before he wrote, I lectured on this subject, and have my notes now, though I do not intimate that he learned it from me. My position is, that it is nothing more than irritable fever, sometimes assuming a periodical form, as you discover in adults during the winter. We can not see why an intermittent fever should not occur thus in children, as well as in adults, simply from a common irritation. I do not

believe that a specific cause is to be found, and I consider this fever among children, simply an irritable fever. It generally occurs with children between one and six years old. It is frequently so slight, at first, as not to be easily detected, and is difficult to cure. The child will appear to be declining, and yet, if not closely watched, the disease can not be recognized. It is not regular in its remissions. There seems to be constantly a slight fever, accompanied sometimes by constipation, and sometimes by looseness of the bowels, and the looseness depends, like the summer complaint, on irritable substances taken into the stomach. It generally occurs in the summer or fall, as do ordinary intermittent fevers, and may often arise from the same cause; but it is said to arise from improper substances taken into the stomach, or from worms, which is said to be a very common cause. But after you have removed the worms, still the fever will often continue.

The prominent symptoms are, an uneasy, restless, fretful condition of the child; dryness of the lips and hands; the hands are very hot, and this may be the only symptom of fever that you can detect—it is a diagnostic symptom.

If the child is old enough to speak of its symptoms, it will complain of pain in the head. The breath is fetid, the respiration hurried—though the pulse may not be, generally, too frequent; there is, usually, much disturbance in the sleep; the child screaming out, turning over, and moaning, but does not like to be disturbed. It is generally cross, and indisposed to speak. It is, occasionally, affected with vomiting, but this is not, by any means, a diagnostic symptom. It may be very costive, and have a disposition to stool, and will strain very much, but not be able to pass any; or, if it does pass any thing, it is hard, indicating extreme costiveness.

The child will not complain of much pain, unless there is piles or prolapsus ani. The head sometimes becomes very much heated, and, in fact, it occasionally terminates in hydrocephalus. You need not expect to find all these symptoms present in all cases, though there will be more or less of them. By

watching closely, you will be able to discover distinct remissions and exacerbations, and these may occur once in two or three hours. The child will remain stupid and dull all the time, though it may have its senses. Where the remissions are well marked, there may be a chill, during the intervals the child will appear to be well.

But it gradually declines for several weeks, yet so slowly that the parents will not discover that there is any thing the matter; when, all at once, the child will be suddenly taken ill, the pulse will rise to one hundred and twenty or one hundred and sixty; the chill will come on, and continue for a long time, followed by severe vomiting. As the fever returns, the face becomes flushed, and the vomiting will continue until the child dies very suddenly, perhaps in one day. Putting the hand up and picking the nose, eyes, and mouth, is a symptom almost always present, when the disease is approaching a fatal termination. Perhaps, no disease is more uncertain in its termination, or more difficult to determine whether it is approaching a fatal termination. This dangerous condition may be taken for hydrocephalus; but in hydrocephalus the child will be restless, screaming, and tossing its head from side to side, throwing its hands over its head, and squirming. If you offer it medicine or food it will take it greedily—it makes no difference which; it seems to have lost its sensibility of taste; but if there is fever without hydrocephalus there will be none of these symptoms. The discharge from the bowels will be black or greenish, and have a very putrid smell, but sometimes rather light, mixed with green or dark flocculi; while, in hydrocephalus the discharges are always clay colored.

Treatment. If you are called in the early stage of the disease, and you are satisfied, by a close examination, that this is the difficulty, you should begin the treatment with a good deal more vigor and force than the symptoms seem to demand.

You do not know what day the violent symptoms may come on. I have been called to several cases, and found the child dead when I reached it; when then the child had been afflicted with remitting fever for a week or more, and this was only the termin-

ation of the disease. I call your attention to this, to show you the importance of commencing in time. Begin by giving an emetic, and continue it till you have produced a thorough effect, and follow this by a cathartic. As a cathartic, I would recommend for a dose, one-eighth grain podophyllin, half a grain of leptandria, triturated with five grains of sugar, and repeated every four hours, until it operates.

A preparation that has been recommended by Dr. BEACH, is composed of senna, hydrastis, podophyllin, and leptandria, in equal parts, to which add spearmint enough to make it aromatic; make an infusion of an ounce of the combination to a pint of boiling water, and give in from one to two tea-spoonful doses every half hour till it operates. As soon as the cathartic has operated, give anti-periodic medicines, such as quinine, lupulin, and prussiate of iron. In all cases, keep down irritability of the nervous system, and, for this purpose, lupulin is the best anodyne I know of. Valerianate of quinine, in this case, is preferable to the sulphate. Vary the dose, according to the age of the child. I would recommend, for a child between one and five years old, about the fourth of a grain of each, repeated once in an hour, and continue for at least ten or twelve hours. You will generally break it up with the first prescription. If the child is vomiting or purging, use means to allay it, and then give the anti-periodic medicines. Bearing in mind that the surface is always to be attended to. Bathe the child in an alkaline solution or in spirits, twice a day, and rub off briskly. Give also diaphoretics. Keep the child as quiet as possible. It may be necessary to continue the treatment for several days, but do not repeat the cathartic, unless the symptoms absolutely demand it. You may give light aperients.

Take upon yourself the responsibility of dieting the child. It is very important that nothing indigestible enter the stomach. You will have but little trouble, after a few days. As soon as the symptoms of fever have disappeared, so that the skin is in a healthy condition, and the child begins to recover its spirits, you may give gentle tonics; the wine cordial is very good;

but if you give this, if possible, get native wine, it is less apt to be adulterated than a foreign article. Mason's alderberry wine is very superior, it is to be had in this city. The child should be bathed regularly once a day in cold water until it recovers its strength, and until the fever is removed; the wet sheet packing is an admirable remedy. If you fail to get it into a sweat by the diaphoretics, give the alcoholic sweat. I know you are taught in the books that it takes ten or twelve days to cure a case of this kind, yet if you follow this idea that it is a periodical disease and treat it accordingly, you may break it up in forty-eight hours. If you are called at a late stage of the disease, when those violent symptoms are on, you must follow a very different course; use means to allay the vomiting and apply hot fomentations over the abdomen, and put the feet in hot water, get up a perspiration by external applications, and then give your anti-periodic remedies. You can arrest the disease if it is not too far gone. There may be hydrocephalus, if so, shave the head and apply warm fomentations to the feet, and cold evaporating lotions to the head. But in this case your chief dependence will be in the hydrogogues, and the diuretics. The acetate of ammonia is the principal remedy.

While practicing in the country I was called to a case where the child had been affected with summer complaint and fever for several days, and it had terminated in hydrocephalus. I was from home when they came for me; when I returned I went to see it, and found that the water had accumulated to such an extent that the sutures were separated at least an inch. The child lay with its mouth open, perfectly insensible. I told the mother I might as well prescribe for a dead child, but she wanted me to do something. I directed her to make a strong solution of salt in vinegar and wring out a bandage in this and bind it around the child's head, and to keep it constantly wet with the solution, and also to bathe the child's surface in warm salt water. She did so; but I went home expecting nothing but that the child should die. The next I heard from them, it was well. The history of the case was this: She commenced operations as I

had directed and in about two hours the child commenced to urinate profusely and continued to do so; the head commenced shrinking, and she gradually tightened the bandage. The child pretty soon went to sleep, and sweat profusely. The urine continued to discharge for three days and the child got well. I have used this treatment frequently since, and have succeeded in all cases except one, and that had been affected two months.

LECTURE LVI.

CROUP.

This is a disease that is very common to children, and usually occurs between the ages of one and eight, but the child may have it any time before puberty. There are three different forms of croup, inflammatory, spasmodic, and pseudo-membraneous; though I am inclined to think that the first two are beginnings of the last.

Croup is caused by an irritable condition of the larynx, giving rise to a spasmodic action. The exciting cause of croup is cold. The spasms may come on and remain permanently and the child die, though it is not apt to prove fatal thus immediately, and when it does it is with some premonition. But in most cases if the child is kept quiet it will get well with the proper treatment. The inflammatory croup is known by a flushed countenance, high pulse and coughing spells, that produce sweat about the head and face, which soon passes off. It is frequently connected with an irritable condition of the hands, but generally a costive state, and comes on in consequence of severe cold. There is a rattling in the throat occasioned by a collection of mucus which the child may be able to throw up if it vomits. It is frequently connected with whooping cough as well as bronchitis. The pseudo-membraneous croup is of a chronic character; the bronchial tubes having become obstructed by a collection of coagulable lymph. The child ceases to throw up the mucus—it is so adhesive it remains attached to the internal surface of the throat. In spasmodic croup there seems to be no mucus, but dryness. The pulse is natural, the countenance may be flushed when the child is in spasms. The cough is whistling. But we have the rattling in inflammatory as well as in the pseudo-mem-

braneous. The voice of the child remains measurably natural, except during paroxysms of coughing. In spasmodic, the treatment is rather simple and it is very important that you should distinguish between them, for the same treatment for one might do no good in another. Keep the child quiet, bathe the surface in alcoholic solution, and give some slight anodyne; the infusion of cypripedium is very good. I have prescribed with good effect an infusion of cypripedium, skull-cap, blue cohosh and catnip, half an ounce of each to a pint of boiling water, sweetened, and given in teaspoonful doses once in half an hour. Lengthen the intervals as the symptoms subside. If the symptoms are severe give it as often as once in ten or fifteen minutes. However, if it does not yield to this, add small portions of lobelia, just enough to produce slight nausea, but don't carry it to the extent of vomiting. Dr. Jones recommended syrup of sanguinaria, but I think the above preparation is better.

The child should be kept quiet, and medicine given from day to day for several days, until it is entirely well; for it may be choked to death if it returns. You will hardly need any thing else but the medicine I have recommended. Don't give opium; I have known several children to die, to whom laudanum had been given, and as soon as the effects pass off, the symptoms usually return with ten-fold violence. Tincture of musk will have an excellent effect. The musk alone will bring the child out of spasms immediately.

Inflammatory croup requires more treatment; I might say, in general it requires about the same treatment as acute bronchitis. The only material difference is, that the inflammation is higher up in croup than in bronchitis, but the inflammation in croup generally rises in the bronchial tubes finally.

Give an emetic, and at the same time put the feet in hot water and apply hot fomentation to the throat; give warm drinks and get up a perspiration. You will invariably find the feet cold. I have usually taken just about this course. Wrap up the hands in cloths wrung out of hot water, and apply flan-

nels over the body, even though the child is feverish and will be distressed for the time, and will throw off the cloths about the chest. Apply stimulating liniment to the throat; let this have considerable turpentine in it to make it penetrate, and then apply warm cloths wrung out in hot water to the throat, and cover so that it will not get cold, then give small doses of an infusion of lobelia, sanguinaria and boneset—enough to irritate slightly the stomach—repeated once in five or ten minutes. Finally, carry it to the extent of vomiting freely, and continue to keep up a slight nausea by giving sanguinaria. If the child is costive give an injection, but do not give a cathartic; for the injection I have generally used a combination of the anti-bilious physic and neutralizing mixture, in the form of an infusion, till it operates mildly; it will allay the fever. The whole surface should be bathed in whisky quite warm, rub the surface and get up a perspiration. Continue the nausea, and occasionally the vomiting, till the inflammatory symptoms subside. The main thing is to keep up a general perspiration.

You will generally relieve the child in from two to four hours, but as there is a tendency to relapse for several days, the treatment should be continued, according to circumstances, and you should be very cautious about the child getting cold. If it is allowed to run out, the symptoms may return and continue, and become chronic, and a pseudo-membraneous croup will occur. In most cases where the child has been bled, and has taken calomel, and the acute symptoms are not entirely allayed, pseudo-membraneous croup comes on and the membranes become permanent and will prove fatal. I have known it to occur under the treatment I have given, on account of not being continued long enough.

Now, I cannot imagine a case of pseudo-membraneous croup where it has not grown from other kinds.

In the violent form of the disease there is more or less spasmodic affection, restlessness, dilatation, or contraction of the pupil. There may be paralysis of the limbs, but this is uncertain; there is always more or less disturbance of the sensoria; the pulse full and hard, and frequent at first; afterward labored and frequently

slow from the oppression of the brain. As the disease progresses it becomes still more alarming; there is difficulty of breathing, and there are paroxysms of whistling cough, rattling noise in the throat, a want of expectoration as in bronchitis, but the inflammation is higher up; there is a little change in the voice, though the larynx is not much affected.

This form will not admit of as vigorous treatment as the others. Very great care is required; the child should be kept perfectly quiet; no noise should be allowed in the room. You will find the pulse very little disturbed, the difficulty is in the throat; keep that warm; you may apply stimulants to it; add cups outside from four to five times a day, but do not scarify; avoid getting up much irritation on the surface, or it will be transmitted to the internal surface, and aggravate the disease; wring out cloths in warm water, and apply to the neck. You may apply tincture of camphor or spirits of turpentine, but not strong enough to produce too much irritation; after this make warm soothing application of mush and elm poultices, so as to sweat the parts gently. Apply tincture of lobelia, but do not let it vomit. You may give some of the articles I mentioned before. I have used boneset and sanguinaria—Dr. Jones used sanguinaria alone; this operates on the bowels. Repeat this frequently for several days, and keep the feet warm; continue to produce slight nausea so as to keep up a gentle perspiration until the symptoms subside, and the cough becomes loose, and when the mucus collects on the stomach the child will vomit freely. Caution the parents not to let the child take cold.

It was stated that this is not a disease peculiar to small children. It is, perhaps, more frequently found in children than in adults, though as far as my experience goes, it is often found in adults. The prominent symptoms are, a very material change in the voice; hoarseness, or entire loss of voice, with constant pains in the larynx, and a tickling cough. The pulse is frequent, and somewhat excited, with a feverish re-action; though the extremities are usually cold. There is not, generally, so much constitutional disturbance as in bronchitis, though it resembles that

disease, and may be connected with bronchial inflammation. There is a good deal of soreness, and the patient is incapable of turning the head without pain. There is no swelling outside, but there is inside ; so as to obstruct the air passages.

The treatment will not vary materially from that of inflammatory croup ; however, it is not proper to give active emetics—the act of vomiting and filling up the throat will cause pain, and perhaps spasms of the glottis, and death : instead of vomiting, give the treatment for spasmodic croup, with hot external applications to the throat ; give small doses of emetic tincture, just so as to keep the patient slightly nauseated for several hours ; then if you do vomit, there will not be so much danger. The combination of sanguinaria, Seneca snake root, and lobelia is excellent for this purpose, in the form of a weak infusion. Apply bitter herb fomentations over the throat. I have used with good effect, a compound of lobelia herb and hops, as warm as it can be applied, in form of a poultice, mixed with soft soap. A good domestic remedy is meal soaked in hot lard, and applied to the throat ; the lard causes relaxation of the parts. This may also be applied to the chest, especially if there is bronchial irritation. Give some oil internally, to produce a cathartic effect ; lard is good. I have known neat-foot oil given for this purpose. Or, you may give linseed oil ; it is better than castor oil. This, or the lard, will relieve the hoarseness sooner than any thing else.

The hydropathic treatment has, of late, been much practiced, and perhaps, is even more successful in croup of children, as well as adults, than that which I have just laid down. In this plan, little medicine is given. But cold water is freely used.

Commence bathing the child's neck in cold water, or apply a wet bandage—this will strengthen the patient very much. Continue this for several days ; let the child's throat be exposed to the air, but not while the rest of the system is in a sweating condition. This is the surest safeguard against taking cold ; do not allow it to be bundled up in comforters.

A re-action will follow this treatment, that will be quite astonishing. The symptoms will yield, and the patient recover.

LECTURE LVII.

QUINSY.

This disease consists in an inflammation of the tonsils and glands of the throat, but extends, more or less, through the throat. The tonsil glands are much enlarged, and, sooner or later, if it does not terminate in suppuration or induration, a chronic enlargement will be the result. It is characterized by fever, a full, hard pulse, dryness of the skin, and fullness of the head, the countenance is flushed, the bowels costive, with more or less cough, though there may not be much cough.

There is hoarseness and some difficulty of breathing; a much greater difficulty of swallowing fluids than solids; there is a hard condition of the fauces; the lips, tongue, and tonsil glands much swollen. It is almost always connected with headache. Difficulty of hearing occurs, owing to the closing of the tubes of the ear. The patient is thirsty, but can not drink without difficulty; any thing stimulating, taken into the mouth, causes pain. The tongue is generally coated and white, indicating mucous irritation. The patient will frequently have a tolerable appetite; but, generally, in the early stage, there is no appetite. The disease generally arises from sudden cold; though, frequently, from the use of mercury. Some of the worst cases I ever saw were from the poisonous effects of mercury.

Treatment. If you know the cause, you must direct your treatment to that. If it is caused by cold, as in the ordinary cause of inflammatory disease, you must use means to reduce the inflammation. Put the hands and legs in hot water, and bathe the whole

surface, so as to get up a general sweat. The best plan for doing this is the alcoholic sweat. Make hot applications to the throat, and let the patient inhale the vapor of the vinegar tincture of lobelia. Put an infusion of these articles into an open dish, and let the head be held over it, so as to breathe it, until it causes a considerable warmth about the face and neck, but you must let the vapor be as hot as it can be borne.

Apply, over the throat, a poultice of hops, lobelia, and vinegar, after the inhalation; and, if it does not produce enough relaxation, give nauseating doses of lobelia. While you are doing this, sweat the patient—give sudorific tea—the patient can now swallow. I have had cases that would drink freely in twenty minutes after commencing the treatment, though they had not been able to drink for a day, or more. The best nauseant is the extract of lobelia, because you can give it in smaller doses.

The patient will soon begin to expectorate, and the saliva will flow copiously—continue to keep up the nausea, nearly to the vomiting point, and, finally, let it vomit freely, and nine times out of ten, you have effected the cure. It may be that it has gone on till puss is formed in the throat; then, this treatment will palliate the difficulty, and when the patient vomits, the abscess will break and discharge; if not, you had better puncture it. A stimulating gargle is an indispensable adjunct to the treatment. I would recommend our emetic tincture as the best, in the first stage; in the second, I would recommend a stimulating astringent; I have used Cayenne and vinegar, with butter. It makes an excellent gargle. Some add salt to it. This seldom fails of giving relief in a few hours. I have used hydrastis and borax; but, generally, an emetic tincture, and I gargle it in the throat; or, if a child, I apply it with a swab of cotton. However, in chronic induration, you will not get rid of it so soon; but continue to follow up this stimulating gargle; or, you may apply nitrate of silver. This leaves the parts harder than before, but it now rapidly becomes softer. You may apply irritating plaster to the external surface of the throat. It sometimes will require three or four months to effect a cure by this treatment.

when there is induration, and sometimes the patient will apply to another physician, who will remove the tonsils. But we have strong authority that this predisposes the patient to disease of the lungs.

Dr. MORROW was strongly of that opinion, and we should not look upon this opinion lightly. I have removed the tonsils, and afterwards the patient died of consumption; but they may have been affected with it slightly before, whether this aggravated it or not, I cannot say. It is an easy matter to remove the tonsils.

The instrument itself will show how to use it.

H Y D R O C E P H A L U S .

I will say a few words of hydrocephalus. It is almost always the sequel of acute inflammation of the membranes of the brain.

It consists in collections of serum in the cavities of the brain. The early symptoms are those of acute inflammation of the brain, pain in the head, with delirium, sooner or later.

The secretion of urine is scanty ; starting in the sleep, twitching of the muscles—this may, or may not, have been noticed before by the parents. It is not unfrequently a sequel to irritation of the bowels, where the child has been affected with summer complaint, and the looseness is too suddenly stopped, by laudanum, paragoric, or morphine, or prepared chalk ; and, frequently, by giving pink for worms. This brings on an irritation and, finally, inflammation of the brain. If the child is young, before the sutures have closed up, they will separate an inch, frequently ; and the skull is sometimes extended to nearly twice its usual size.

When this disease is first discovered, in its early stage, your first effort should be to get up an equilibrium of the circulation—make hot applications to the feet and legs ; give a tolerably active cathartic, such as our common anti-bilious physic, and cream of tartar. This will operate sooner than any thing I know of. Give ten grains in substance, mixed up with cold water, and repeat once an hour, till you produce five or six thorough opera-

tions. At the same time, make stimulating applications over the abdomen, by wringing out cloths in salt and vinegar; or, you may apply mustard, and then salt and vinegar, and use brisk frictions along the spine, or cups may be used along the spine; but do not injure the child by too powerful oppression upon the spine; at the same time, take off the hair, but do not put on ice water or blisters; this is enough to kill a healthy child. Make evaporating applications, and the child will go to sleep. Then make a poultice of lobelia, boneset, and slippery elm, and apply to the head—keep it wet with warm water. This will frequently cause the child to break out into a profuse perspiration. I have also known a clay cap used with good effect—a cap made of common clay, and applied wet on the head, and then changed as it dries. Diuretics are important remedies—give freely the acetate of ammonia, queen of the meadow, or any of the most reliable diuretics.

